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Ash's Canadian Monthly Circular

VOL. III.

TORONTO, OCTOBER 1, 1912

No. 1

THE SENSORY NERVES OF THE GINGIVO-DENTAL REGION IN THEIR RELATIONS TO REGIONAL ANAESTHESIA.

BY DR. EDOUARD FRITEAU

(Professor at the Dental School of Paris.)

(Continued from September Number.)

POSTERIOR PALATINE INJECTION.

The regional injection of the anterior palatine nerve ought to be carried out at the level of the posterior palatine orifice; thus this orifice is indicated upon the palatine vault by a slight depression of the mucous membrane above the second molar. It is sufficient to plunge in the needle at the level of this depression to push it up to the osseous tissue, to introduce it into the canal which presents its depth to the point, and enables us to carry out a sectional injection of the anterior palatine nerve; on account of the neighbourhood of the soft palate and of the functional loss of its muscles, we must not inject at this level more than a quarter of a cubic centimetre of anæsthetic solution.

The injection practised at the level of the posterior palatine orifice causes insensibility of the gum which encircles the maxillary molars. It, therefore, enables us to open, without pain, palatine abscesses which may occupy this region. By associating Guido Fischer's injection, upon the posterior surface of the maxillary tuberosity, with the injection at the level of the posterior palatine orifice, we obtain absolute insensibility of the whole of the organs in the region of the molars and of the gingivo-dental region. We are thus able to carry out, upon all these teeth, the usual surgical operations: pulp extirpation, treatment of dentinal hyperæsthesia, dental extraction, alveolar trepanation, the opening of gingival abscesses, root curretting, apical resection, etc. 光栄

NASO-PALATINE NERVE.

The naso-palatine nerve, which also bears the name of the internal spheno-palatine nerve, is likewise an emanation of Meckel's ganglion. It is the internal bifurcated branch of the spheno-palatine nerve which proceeds from Meckel's ganglion upon its anterior edge; in the same way as the palatine nerves, so the spheno-palatine nerve receives from Meckel's ganglion the sensitive filaments which the superior maxillary nerve sends out from its exit from the large round canal.

Of the two bifurcated branches of the spheno-palatine nerve, the internal branch only, the internal naso-palatine branch, interests the dentist. This branch runs upon the septum of the nasal fossæ, proceeds diagonally from the posterior and superior portion up to the hollow canals between the incisor bone and superior maxillary—that is to say, up to the anterior palatine canals. The naso-palatine nerve runs into the lateral canal, traverses it, and arrives at the palatine vault upon which it becomes reflexed from the front to the back. Its posterior ramifications anastomose with the ramifications of the anterior palatine nerve and thus assure the sensitiveness of the palatine mucous membrane from the median line up to the gum.

In reality the gingival mucous membrane, which upon the palatine surface surrounds the incisors, the canines, and the premolars, is innervated by the naso-palatine branch, the internal branch of the spheno-palatine nerve, itself an issue of Meckel's ganglion. We cannot repeat in regard to the naso-palatine branch, what we have said on the subject of the palatine nerves, for the reason that the procedures of sectional anaesthesia which affect the trunk of the superior maxillary nerve, other than at its exit from the large round canal, leave intact the sensitiveness of the region where the naso-palatine nerve distributes its terminal filaments into the gum (palatine surface) of the incisors, of the canines, and of the premolars. In order to obtain complete insensibility of the gingivo-dental region (tooth, alveolus, gum at the level of the incisors, of the canines, and of the maxillary premolars), we must add, for the anatomical reasons given above, to the injections recommended by Jeay and Fischer, an intramucous injection, and carry it out behind the buccal surface of the superior central incisors, at the level of the inferior orifice of the anterior palatine canal. If this anterior palatine injection is not practised, it is impossible to operate upon the palatine surface of the gum of this dental group (incisors, canines, premolars) because the sensibility proceeds from a nervous source already detached from the nerve at the point where Jeay's needle touches the trunk of the superior

maxillary nerve. The anterior palatine injection will, therefore, replace the injection of Jeay or of Fischer in the case of alveolar operations for apical abscesses and for non-surgically treated abscesses of the palatine surface of the gum in relation to incisors, canines and premolars. It will be sufficient for the operation of opening up a palatine abscess in this region, since we have then only to deal with a mucous membraneous intervention.

We think it hardly necessary to add, to make the matter quite clear, that if the surgical intervention does not refer to the level of the maxillary dental group, except upon the teeth themselves—dentine, pulp and ligament—Jeay's and Fischer's injections furnish sufficient anaesthesia. The palatine nerves and the naso-palatine nerve have no relation to the dental tissues. All the same, assuming that between the gingival filaments of the palatine and the naso-palatine nerves and the alveolar filaments of the superior, posterior, and anterior dental branches, anastomoses are established, it will be well in case of an operation upon the alveolar edge to carry out, in addition to Jeay's or Fischer's injection, a posterior palatine injection for the group of molars, and an anterior palatine injection for the group of incisors, canines and premolars, on every occasion on which the surgical intervention has reference to the alveolar osseous tissue.

ANTERIOR AND SUPERIOR DENTAL NERVE.

In lieu of seeking to obtain anaesthesia of the entire superior gingivo-dental region, insensibility in only a part of this region is the aim of regional anaesthesia. The origin of the anterior and superior dental nerve from the nerve trunk itself enables us to arrive at this result, but only in a well defined territory of the gingivo-dental region, that is to say, in the territory of the incisors and the canines.

The anterior and superior dental nerve becomes detached from the superior maxillary nerve at from 6 to 8 mm. behind the sub-orbital orifice. From there it traverses the whole length of the anterior and superior dental canal. The anatomy of the superior and anterior dental canal has been particularly studied by Clermont. This canal first takes a horizontal course, directed from without to within, and then a vertical direction. In this portion of its course it is in intimate relation with the anterior wall of the maxillary sinus. The sinus osseous wall is sometimes missing, and the canal is no more than an osseous branch in direct contact with the mucous membrane of the antrum of Highmore. The canal thus reaches the level of the floor of the nasal fossae; its direction still changes; it describes a supero-internal concave curve,

the nasal fossa. The infallible guide is the anterior extremity of the inferior trumpet, which presents itself as a mass hinged to the side opposed to the septum; it is between the septum and the trumpet, a little below the anterior extremity of the trumpet, in front of the inferior meatus, which the plug ought to occupy" (Escar).

Anæsthesia appears at the end of twenty minutes or half-an-hour in the inciso-canine region on the side on which the plug has been placed, sometimes even on the level of the incisors on the opposite side. Provided that the anterior dental nerve distributes sensitiveness to the incisor and canine, to the alveoli of these teeth, and to the gum which lines the vestibular surface of this region, Escar's procedure finds application in the following operations: extirpation of the pulp, treatment of dentinal hyperæsthesia, partial avulsion of the incisors and of the canines, resection of the anterior wall of the alveolus for root curretting, resection of the apex, and the opening up of vestibular abscesses in the region which commences on the median line and finishes at the level of the first premolar. We do not consider it necessary to repeat that if some sensitiveness persists upon the vestibular surfaces of the gum, this is due to the fact that the gum receives at this level terminals from the sub-orbital branches, not involved by Escar's procedure, which acts far from these branches, contrary to the procedure by means of sub-orbital injection.

It remains to be stated that the palatine surface of the gum at the level of the incisor region is not at all anæsthesised by Escar's procedure. Its anæsthesia is possible by the anterior palatine injection described above.

We have endeavoured to schematise upon concise figures the divers distributions of the sensory nerves of the maxillary alveolo-dental region. Assuming that at the level of the gingivo-dental region the different branches of the superior maxillary nerve are anastomosed between themselves, and that even on the side of the vestibular surfaces, we must also bear in mind the anastomoses which the facial nerve, although it is exclusively motor, sends to the terminals of the superior maxillary nerve.

(To be continued.)

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Wheels	19 to 22	1.25	1.15	1.08
Inverted Cones	33 1/2 to 40	1.00	.90	.83
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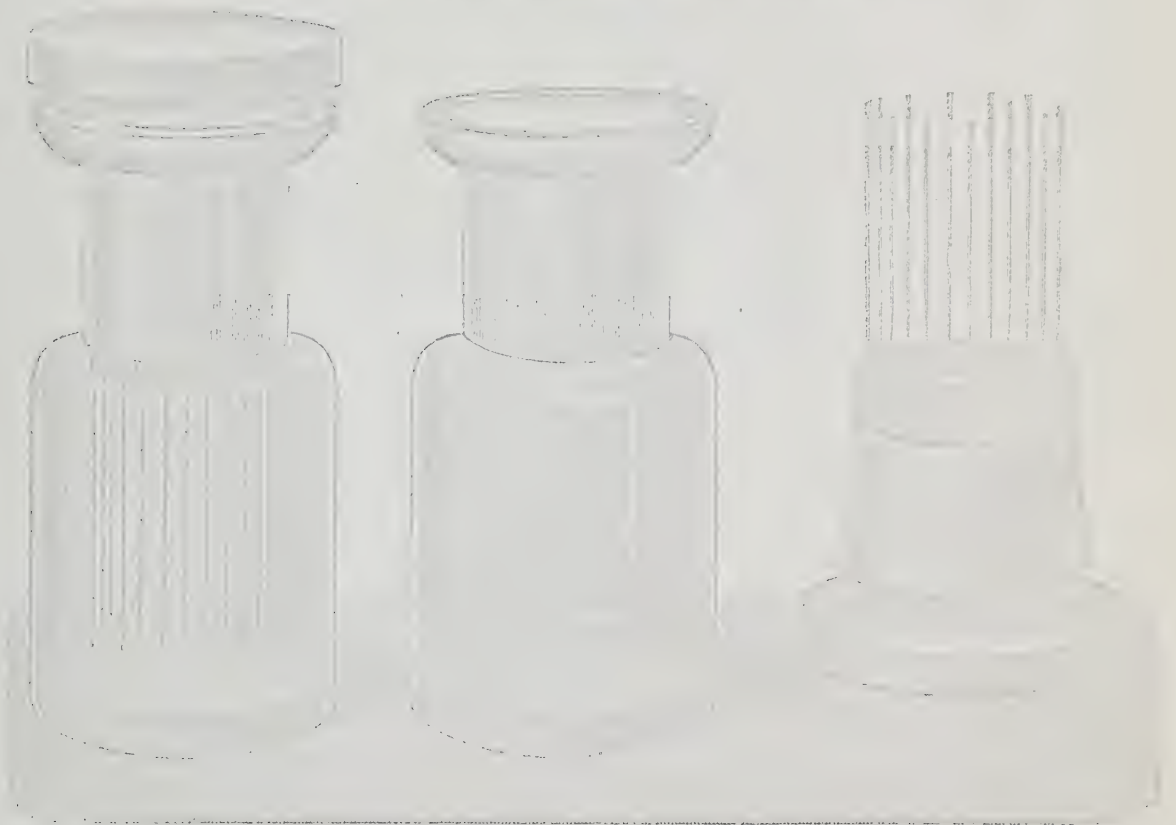


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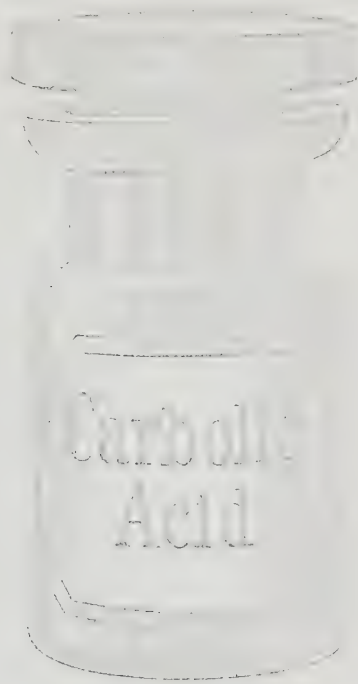
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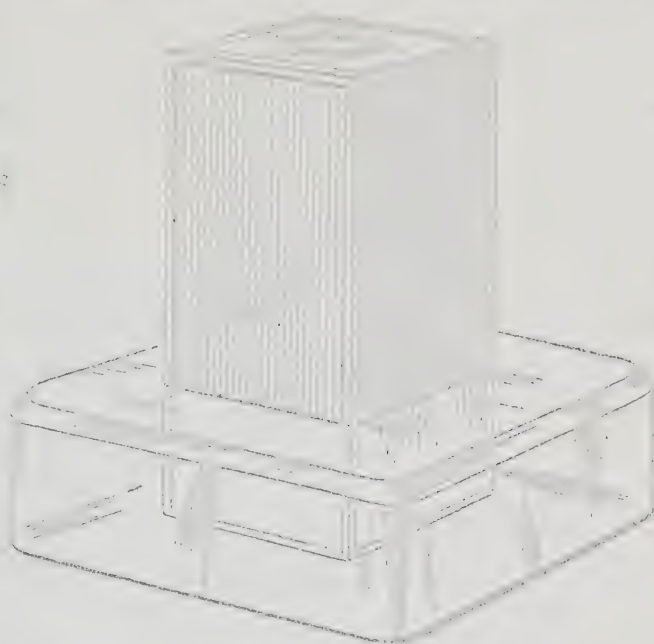
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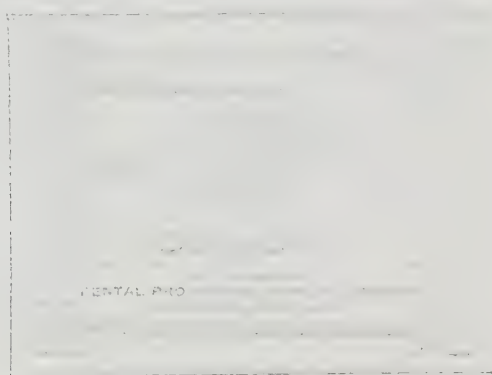
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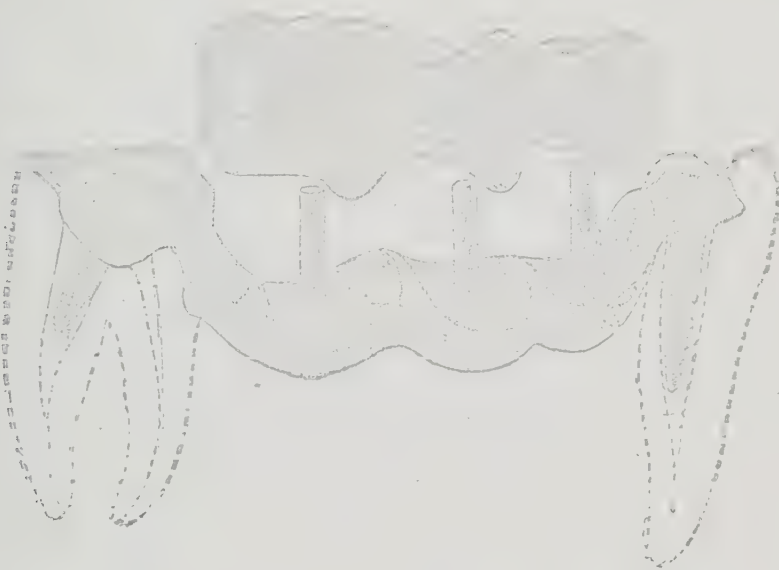
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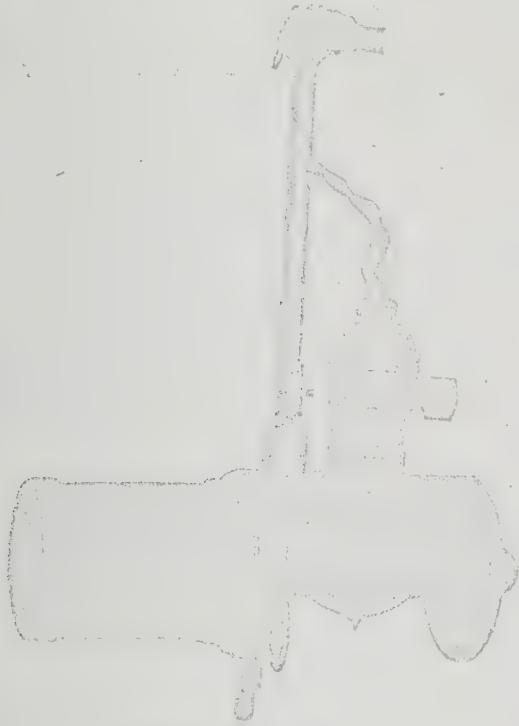
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A feature not obtained in any other mouth illuminator is the shutter, which enables the operator to control the circle of light of four diameters, ranging from two to six inches. This is quickly and easily attained by moving the small handle projecting from below to either right or left to a stop. It is conceded that controlling the diameter of the light is of as much importance as the proper focusing.

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24 Kt. with 5% Platinum

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22 Kt. Soft, Medium or Hard
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22 Kt. Special for Backing
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If you have never experienced the personal gratification derived from having effected mouth health for your patients afflicted with Pyorrhea you have missed much, but your patients are the big losers in lost teeth and impaired health. Your patients depend on you and it's up to you to make good.

Our new book is free on request and covers in a practical manner the subject of "Pyorrhea, its Causes, Effects, Treatment and Prevention," and is profusely illustrated with cuts showing cases treated, methods of scaling, the use of splints when necessary, etc., etc.

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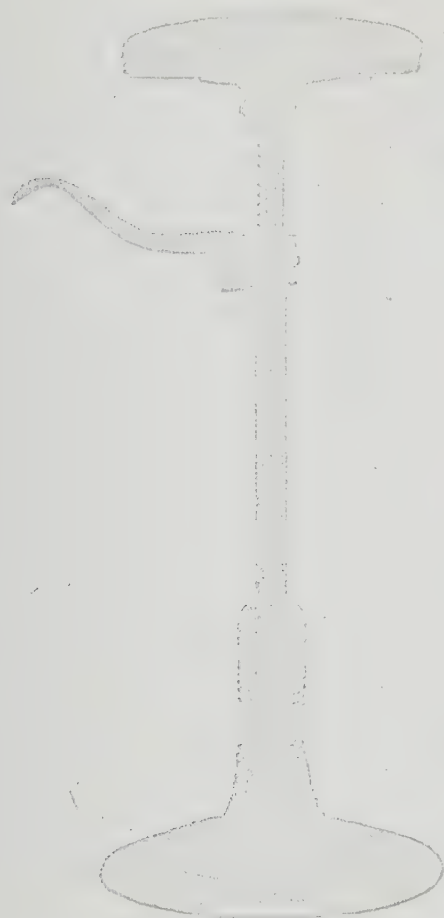
Plan to take our post-graduate Course when in New York. There is no charge for instruction and we furnish everything.

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If Your'e "Fagged Out"



you cannot do justice to your dental work. Standing on your feet all day is tiresome in the extreme—but there's no excuse for doing it because the

Automatic Operating Stool

enables you to sit down and rest while working.

More than this, it adjusts itself automatically to every position of your body.

Price \$18.75, Black Enamel

Add \$1.25 for either White or Blue Enamel

LEE S. SMITH & SON COMPANY
PITTSBURG, U.S.A.

A new and improved Dental Preparation

CARMI-LUSTRO

(A new and improved Dental Preparation)

CARMI-LUSTRO beautifies the teeth, by restoring the natural brilliancy to the enamel, aiding thereby to their permanent preservation

CARMI-LUSTRO, contains no abrasive whatever. After removing stains, dry the teeth, and apply the powder with a clean buffwheel.

For patients home use, we have on the market, a small size that dentists can prescribe. Direct your patient, after using the brush, to dry the teeth, and apply CARMI-LUSTRO with a cotton roll, cheese cloth or linen, rubbing them vigorously. Daily applications of CARMI-LUSTRO will make the use of all other dentrifices unnecessary, as they only dull the shining surfaces produced by CARMI-LUSTRO.

CARMI-CLEANER

Removes all stains and foreign matter. It will not scratch or dull the enamel. It is entirely free from flour of pumice, or other harsh substances generally in use for cleaning purposes.

The above photograph was taken in a clinic given by Dr. F. H. SKINNER, of Chicago, Ill., when demonstrating Carmi-Lustro.

CARMI-CLEANER will clean the teeth, and put them in a condition whereby the natural life luster is readily and permanently restored by application of CARMI-LUSTRO. Mix CARMI-CLEANER with water to remove stains, and for a finish, only dampen the powder so as to produce enough friction to leave the enamel very smooth.

PRICES

Carmi-Lustro (Professional size).....	\$1 25
Carmi Lustro (Commercial size).....	6 00 per doz.
Carmi-Cleaner (2½ oz. package).....	0 65

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MANUFACTURERS

CARMI-LUSTRO COMPANY

MILWAUKEE

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Don't Experiment with an Unreliable Gas Apparatus

The life of the patient, to a great degree is in the control of the apparatus. It behooves you to select an apparatus free from complication.

Heretofore, in administering N₂O, the patient was asphyxiated, rather than anesthetized, a condition due mostly to faulty, uncertain gas outfits and unknown value of continuous mixing of Oxygen.

This situation is completely reversed when using the CLARK NEW MODEL GAS APPARATUS with the CLARK SYSTEM of administering N₂O and Oxygen, the new and ideal Anaesthetic.

CONFIDENCE replaces UNCERTAINTY. The patient is being ministered to by a safe and dependable apparatus and a reliable system.

The CLARK NEW MODEL APPARATUS is absolutely void of spiral passages, small ports, numerous complicated valves, unnecessary regulations and superfluous mechanism, all of which are hazardous.

Instead the CLARK OUTFIT offers a simple one handle control which responds spontaneously with each movement to the right or left; the channels are direct, with large openings; the patient safely regulating the flow, with natural breathing.

CLARK New Model Gas Apparatus

Don't invite fatalities. Investigate the CLARK APPARATUS. Compare it with others.

Send for
Illustrated
Pamphlet
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Lectures

Showing manner in which Gases
are Intermixed

Showing manner in which Gases
are Intermixed

A. C. CLARK & COMPANY
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GRAND CROSSING

CHICAGO, ILL.

Ash's Canadian Monthly Circular

TORONTO, NOVEMBER, 1911.

NO. 2

THE SENSORY NERVES OF THE GINGIVO-DENTAL REGION IN THEIR RELATIONS TO REGIONAL ANAESTHESIA.

BY DR. EDOUARD FRITEAU

(Professor at the Dental School of Paris.)

(Continued from October Number.)

INFERIOR GINGIVO-DENTAL REGION—INFERIOR MAXILLARY NERVE AND ITS BRANCHES.

The inferior gingivo-dental region is completely innervated by the inferior maxillary nerve, the trunk of which, with its motor and sensory fibres, proceeds from the cranium through the oval orifice, and reaches the zygomatic fossa in a vertical direction. A few millimetres after its exit from the oval orifice the nerve trunk scatters its branches; some of them, in particular those which give mobility to the masticatory muscles (masseter nerve, pterygoidean nerve, deep temporary nerve, etc.) and those that give sensibility to the mucous membrane of the cheeks and the temple (buccal nerve, auriculo-temporal nerve) have their origin quite close to the oval orifice. On the other hand, the branches, upon which devolve almost the entire sensory distribution of the inferior gingivo-dental region, separate from the nerve trunk some distance from the base of the cranium, in the regions most easily accessible. From this general anatomical distribution, to which we shall return, the partisans of sectional anaesthesia, in lieu of seeking to reach the trunk of the inferior maxillary nerve, have carried their investigations to certain branches of the nerve, particularly to the inferior dental nerve, thus avoiding the inclusion in their "physiological section" of the motor nerves of the masticatory muscles, of which even the passing paralysis might have caused trouble.

For a purely anatomical reason no method of regional anaesthesia reaches the inferior maxillary nerve immediately at

Second-Hand Goods

1	White Enamelled Cabinet, Oak	\$20 00
1	Special up-to-date Golden Oak Cabinet with Mirror and Medicine Top, practically new. Cost \$125.00, price..	60 00
1	Davis Gasometer, less Face Piece and Tubing, excellent condition	18 00
5	Elgin Casting Machines, practically new, each.....	25 00
1	Wetherby Suction Machine (new style), in A-1 condition	25 00
1	Kitter Storage Battery Engine, all cord overhead type, complete, practically new.....	175 00
1	Pelton Furnace, 110 V., A-1 condition	25 00
1	S.S.W. Pattern, Legbase Chair.....	30 00

WE INVITE SPECIAL DEPOSIT ACCOUNTS.

A cash deposit of \$100.00 to apply to general merchandise entitles the sender to a discount of \$11.11.

A cash deposit of \$50.00 entitles the sender to a discount of \$2.50.

A cash deposit of \$25.00 entitles the sender to a discount of \$1.25.

Why not send us a deposit NOW. We carry a General Line as well as the products of our own factories.

FOR SALE

DENTAL PRACTICE—Town of Barrie, Ont., Office of the late Dr. McLaren, satisfactory terms for quick sale. Apply Claudius Ash, Sons & Co., Toronto, Ont.

DENTAL PRACTICE—Niagara Peninsula. Apply Ash & Sons
" " Town of Napanee. " " "

DENTAL OFFICE—With Chair, Engine and Gasometer, \$350. This Practice yielded \$1700 Per Annum on a one day a week visit. Apply Ash & Sons.

DENTAL PRACTICE—In Western Ontario, an excellent opportunity. Ill health cause of selling. Apply Ash & Sons.

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Excellency, Purity, Strength, Elasticity
and Density.

To mark the genuineness of our Rubbers, the face of every box and envelope which we supply bears this signature and monogram—



and one of the pieces of cloth in which each sheet of rubber is packed bears this signature—



in addition to the name of the Rubber.

Always ask for Ash's when ordering Dental Rubbers.

For full list of our Dental Rubbers showing prices, see next page.

IMPORTANT.

We have drawn the attention of the profession for months past to the fact that we give full 16 ounces of Rubber to the pound, exclusive of the linen backing. We have also stated that some other manufacturers do not give 16 ounces to the pound. We now state that consequent to the agitation in America, demanding full weight and measure, these manufacturers to protect themselves from the law are omitting to mark the weight of rubber on their containers.

Ash's Dental Rubbers

Are the best in the World, and are the standard by which all others are judged

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....				
No. 1X Pink, Medium.....				
No. 1 Pink, Light	\$6.00	\$5.40	\$5.00	\$4.75
Gum Pink, Medium.....				
Gum Pink, Light.....				
No. 2X Pink, Medium.....				
English Pink, Medium.....	5.00	4.50	4.25	4.00
English Pink, Light.....				

FOR BASE

Improved Black.....		
Combination.....		
White for Side Blocks, etc.....		
Child's "Q".....	4.25	3.80
A. E. Elastic, Dark Brown.....		
W. Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown	3.75	3.35
Soft Base.....		
Dark Red.....		
Flexible Base.....		
Dark Elastic.....	3.50	3.15
Maroon.....		
Red.....		
Orange.....		
Dark Brown.....	3.00	2.70
Brown.....		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degree Fahrenheit	Time	lb.
Soft Pink, for lining Palates.....	310	1 15	\$6.00
Soft Dark Red.....	310	1 15	4.25
Vela for Artificial Palates.....	270	6 0	6.00
Brown Weighted.....			4.25
Pink Weighted.....			6.00
Brown Repairing.....			4.75
Pink Repairing			5.00

NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

CLAUDIUS ASH, SONS & CO., LTD.

ASH'S MINERAL FACINGS FOR DENTAL REPAIRS

Made in the principal patterns and sizes of our Flat Pin Teeth.

The three sizes of our Mineral Facings, here illustrated, are sufficient to show the distinctive feature to which we wish to draw attention, viz., the oval cavity in the back of each.

They can be used for repairing nearly every kind of denture; they are easily applied, exceedingly durable, and can be quickly fitted—it does not take longer than from ten to fifteen minutes to fit one.

They are invaluable for repairs to Bridges, and in all cases of Plate and Crown Work in which a flat tooth has to be replaced.

The oval cavity at the back of each facing corresponds with the positions of the pins in our Flat Pin Teeth. The facings do not require backing, but can be applied to the backing of frac-

tured or broken teeth when the broken portions of mineral have been removed from the backings.

DIRECTIONS FOR USE.

Chip away the remains of the broken tooth from around the pins in the backing, and roughen the backing with a suitable instrument or tool.

Make a thin mix of Ash's Inlay and Crown Cement, or other suitable Oxyphosphate cement, paint both the tooth, backing and the new facing with a thin layer of it, press the facing firmly on the backing and keep it under pressure until the cement has thoroughly set.

Important Note.

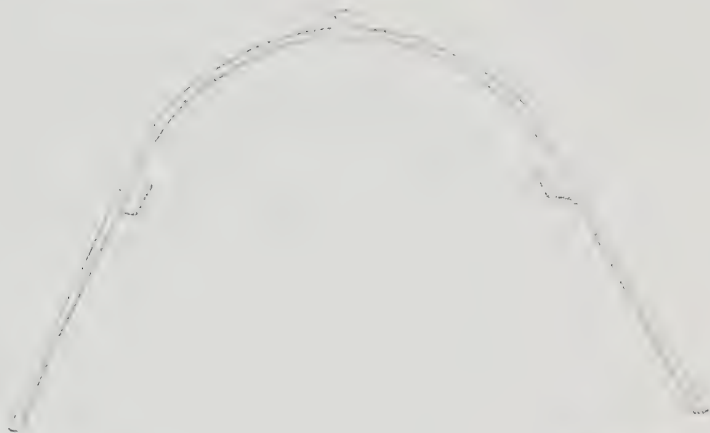
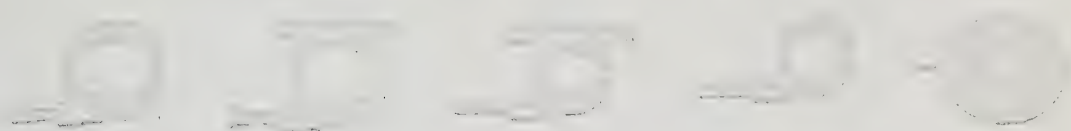
On no account must any of the Silicate Translucent Cements be used for attaching our Mineral Facings to teeth backings, etc., because they are not sufficiently adhesive for the purpose.

Ash's Mineral Facings.....each \$.18

Ash's Mineral Facings.....per 100 15.50

CLAUDIUS ASH, SONS & CO., Limited

Globe Regulating Apparatus



ASH & SONS, DENTAL SURGEONS, LONDON

GALLOWAY'S SUCTION DEVICE

FOR LOWER DENTURES ONLY

Patented in United Kingdom and U.S.

Other Patents Pending.

This Suction is the most satisfactory ever offered. It consists of a curved metal bar, which has counter sunk holes in it for four pins to secure it to a plaster model, and a vulcanized strip of Ash's specially prepared Vela Rubber which so well withstands the oral fluids.

This Rubber Strip is held in position in the denture by the suction which is produced by the small holes on the curved surface and to the gum by the suction through the larger holes on the surface. The Strip can be removed and cleansed, and replaced in half a minute.

The device is clean and secures the denture properly without any discomfort to the patient.

PRICE - - \$1.00

SOLE AGENTS—

Claudio Ash, Sons & Co., Limited

rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slot exactly opposite the letter O in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25
Aluminum-Alloy Stud with 3 India-Rubber Discs	each	.50
	per half doz.	2.50
Extra India-Rubber Discs, any size	per doz.	.30

Claudius Ash, Sons & Co., Limited
SOLE AGENTS

RADICIN

(Lepowick)

Has Cured Thousands
of Cases of

PUTRESCENT PULP

Trouble in One Sitting

SEND A MAIL ORDER NOW

PASTE and LIQUID - - \$1.50

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SOLE AGENTS

Ask about Bleaching with Radicin

Mosley Crown Remover

An Ideal Appliance for Removing
Crowns from Roots.

Diagram.



Normal Size.

The Mosley Crown Remover was the first instrument devised for removing Dowel Crowns from the mouth. Its primary object is to remove these crowns without in any way injuring the root. This is accomplished quickly and painlessly. In most cases the crown remains uninjured and can be used again if desirable.

A slight turn to the right of Thumb Screw E removes the Crown, one Wedge Tongue pulling the Crown downwards, the remaining two supporting the root.

- | | |
|--------------------|----------------|
| A. Wedge Tongues 3 | D. Thumb Screw |
| B. Vice Jaw | E. Thumb Screw |
| C. Thumb Screw | F. Jam Nut |

Complete directions with each Remover.

PRICE - - \$5.50

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A POPULAR TEMPORARY STOPPING
30 Cents a Box

It's a good guttapercha, scientifically prepared, and
it will please you as it has satisfied
many others.

WE MAKE A QUANTITY RATE OF
6 BOXES FOR \$1.50

SEND US AN ORDER NOW

Ash's Popular Stopping

Claudius Ash, Sons & Co., Limited

BUXTON'S GAG



This Gag has long been the premier article of its kind. It is strong and durable. Will retain itself in the mouth and the handles are out of the way of the operator.

In addition to being a perfect Gag, it is most useful as a mouth opener, as the beaks are so constructed that one falls below the other and they can be forced in between the upper and lower teeth.

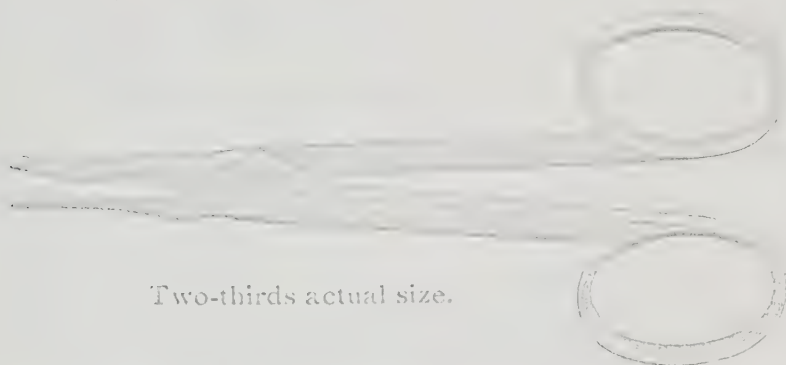
PRICE - - \$4.50

Claudian Ash, Sons & Co., Limited

Universal Crown Scissors

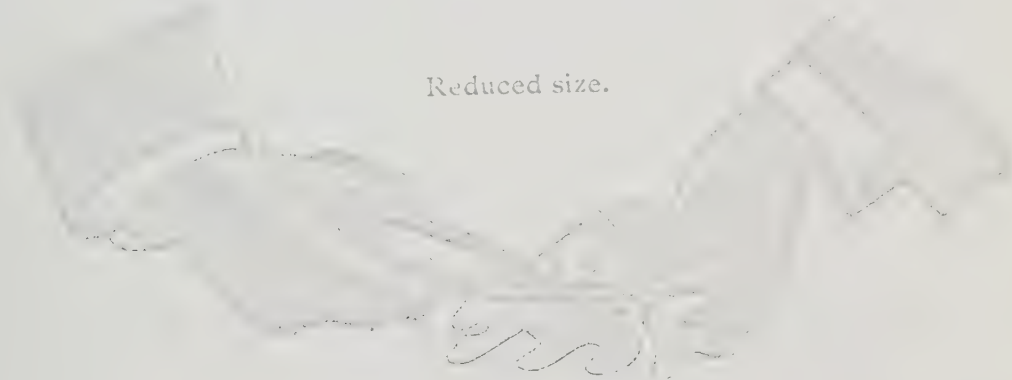
(Specially Tested)

The most useful form of Scissors on the market ; an invaluable tool for the Dental Laboratory, with which the same work can be done as with the ordinary right or left, straight or curved Crown Scissors.



Two-thirds actual size.

The blades of the Universal Scissors are set at right angles to the handles and thus stand away from the work ; only the cutting edges come in contract with it ; the blades can therefore be freely turned in any desired direction without danger of bending or twisting, or tearing the metal ; hence straight, curved or angular cuts can be made with equal ease.



Reduced size.

Some idea of the wide range of usefulness of the Universal Scissors may be gathered from the accompanying reduced size illustration, which shows a number of various shaped cuts in a plate and how the body of the blade exposed to view stands away from the metal.

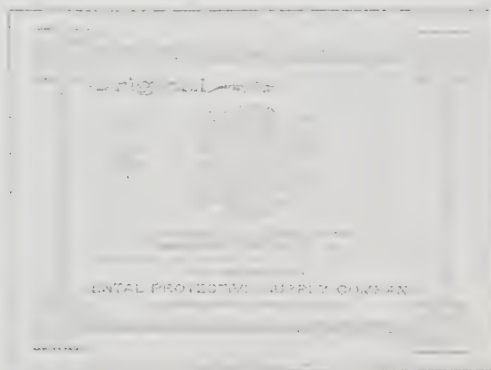
Universal Crown Scissors..... \$1 60

CLAUDIUS ASH, SONS & CO., Limited

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BUT

An old and popular Cement in a new package, Containing 6 double portion bottles of powder, assorted colors and same of Liquid.



1 Color Box	-	-	\$ 1.25
4 " "	-	-	3.00
6 " " Double Portion			12.50

All of the above are obtainable at
your Dealers

LEARN TO SAY FELLOWSHIP

Dental Protective Supply Co.

2231 Prairie Ave. - - CHICAGO

VILLIAMS MAT GOLD

The best filling material ever produced.
A bold statement, Eh?

Prove it! Buy a box from your dealer on our use half the box guarantee and you be the Judge.

Don't give it a fair trial, be biased and partial, "maul it," "rough house it," treat it in a way that no other gold would stand the abuse.

We don't ask you to follow the directions, nor put in one condition. Your own judgment is sufficient. You will find out it is the best filling material ever produced and it will become as much a necessity in your practice as your chair or engine.

Made in Strip or Mat Form.

1-8 oz. \$5.00 1-16 oz. \$2.50

SPECIAL INTRODUCTORY OFFER

1-8th oz. Gold	\$5.00
10 Nickel Steel Pluggers	1.00
1 Steel Center Hand Pres. Hdle	1.00
1 Morocco Plush Gold Box	1.00

One Pkg to each dentist	\$12.00
	\$6.00

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REFINING COMPANY**
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CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

AFTER HOURS N. 4284



If an intense White
Light is desired,

order the

Lewis Illuminator

with the

MAZDA LAMP

Patented May 3rd, 1905
Dec. 20, 1910

The "MAZDA" is the first small Tungsten perfected. It produces a very white light of 40 candle power, at a consumption of only 25 Watts. Fits the Lewis Illuminator same as the "Femco" commonly supplied, but adds \$1.90 to the price making it \$16.90. The lamp alone is \$2.50.

For 110 volt current only at present

The Bracket is always \$4.60 Extra

BUFFALO DENTAL MANUFACTURING CO.
BUFFALO, N.Y., U.S.A.

Ash's Canadian Monthly Circular

Vol. III.

TORONTO, DECEMBER 1, 1912

No. 3

THE SENSORY NERVES OF THE GINGIVO-DENTAL REGION IN THEIR RELATIONS TO REGIONAL ANAESTHESIA.

BY DR. EDOUARD FRITEAU

(Professor at the Dental School of Paris.)

(Continued from November Number.)

METHOD OF DIEULAFÉ.

Dieulafé's procedure differs from Nogué's in reference to the spot where the penetration of the needle is to take place. In lieu of penetrating within the internal lip of the anterior edge of the ramus, investigated by the left index finger, as Nogué's recommends, Dieulafé counsels the insertion of the needle outside the pterygo-maxillary ligament. The position, in relation to the triturant surface of the second molar, is the same in the two methods.

Dieulafé takes for the point of objective the pterygo-maxillary ligament, which it is always easy to delimitate on the floor of the buccal vestibule when the mouth is partly open, under the aspect of a kind of thin ribbon, the external edge of which unites the external pterygoid apophysis with the internal lip of the anterior edge of the ramus, in the vicinity of the alveolar edge.

Technique.—At the bottom of the buccal vestibule, the mouth being partly open, examine with the fleshy part of the index finger of the left hand the pterygo-maxillary ligament. Push the needle outside this ligament, as near as possible to the internal surface of the ramus, upon a point situated from twelve to fifteen millimetres above the occlusal surface of the second

Results.—At the end of from five to ten minutes the skin of the chin, the skin and mucous membrane of the lower lip are completely deprived of sensibility, and we are able to carry out upon these regions the incision of tumors, the suture of wounds by cutting instruments, etc. In regard to anæsthesia of the incisivo-canine territory, the vestibular surface, it cannot be complete, because its sensibility is dependent upon the anastomoses of the mental nerve and of the incisor plexus, and, by this method, only the mental nerve is reached; hence the anæsthetization of the mental nerve does not suffice for trepanation of the alveoli, and for the opening up of abscesses in the inferior incisivo-canine region.

THE LINGUAL NERVE

Anatomy.—The second terminal branch of the inferior maxillary nerve, the lingual nerve, is already known to us, for we have seen it escorting the inferior dental nerve in the maxillo-pharyngean region, and that, particularly at the height of Spix's spine, it is so close to the inferior dental nerve that injection by *N. 2* of the *Fig. 1* method *Fig. 2* contemporaneously the physiological section of the two nerves.

The lingual nerve, after having quitted the maxillo-pharyngean region, where it takes a marked vertical direction, enters into the floor of the mouth and follows a horizontal direction: it runs just above the mucous membrane of the floor of the mouth (see Fig. 34), outside the hypo-glossean muscle; in other respects it can be easily reached by sectional injection, in case we should wish to reach it alone without affecting the inferior dental nerve.

The lingual nerve, after having received the anastomoses of the facial nerve of the otic ganglion, the hypo-glossean, and of the mylo-hyoidean, distributes its terminals to the mucous membrane which lines the inferior surface of the tongue, its two edges, and the two anterior thirds of its dorsal surface. It is the general sensory nerve of these portions of the tongue.

The lingual nerve also supplies terminal filaments to the mucous membrane of the buccal floor, to that of the gums, the buccal surface, from the level of the first premolar up to that of the central incisor. These gingival filaments anastomose with the terminals of the gingival and alveolar filaments of the incisor plexus.

METHODS OF SECTIONAL ANÆSTHESIA.

Two methods are at the moment in use for causing the physiological section of the lingual nerve.

Ash's Pink Rubber

GUM PINK LIGHT has a large sale the world over, and maintains the foremost place as a Pink Rubber, because of the excellence of its colouring and its uniformity.

Many manufacturers have tried to reproduce it but without success.

ACCEPT NO SUBSTITUTE - insist on the original.

To mark the genuineness of our Rubbers, the face of every box and envelope which we supply bears this signature and

L. Ash & Co. Ltd. 

one of the pieces of cloth in which each sheet of rubber is packed bears this signature—

L. Ash & Co. Ltd.

If You Want To Insure Success

In the Casting of Gold Inlays and Gold and Aluminum
Dentures use

SOLBRIG'S

EMBEDDING MATERIAL

The great amount of research work done by M. O. SOLBRIG, D.D.S., of Paris, has, among other valuable results, given us the seal in Investments. In the Embedding of large cases the most frequent cause of failure is through inability to properly surround the model, feeling certain that no air bubbles exist. SOLBRIG EMBEDDING MATERIAL is mixed and poured like cream, giving absolute certainty of perfectly surrounding the model. The total absence of shrinking and cracking will delight you. It is a very open, porous material, and allows a free escape of air from the mould.

Tin containing 7 lbs.	-	-	-	\$1.25
Tin containing 28 lbs.	-	-	-	\$3.50

ASH'S

CANADIAN

MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

CLAUDIUS ASH, SONS & CO. LIMITED.

CANADIAN BRANCH,

11-13 GRENVILLE ST. TORONTO, CANADA.

MAIN DEPOT

LONDON, W. ENGLAND.



JANUARY - 1913

Vol. 3 - No. 4

¶ With the initial number of the Monthly Circular for 1913 we beg to announce that we have increased the size and improved the appearance of the publication. The change of outside cover each month will be of interest, as original and suitable subjects will be reproduced from month to month.

¶ Owing to the increased size of the paper we will be able to devote more space to original articles of interest. Altogether, the Circular during this year will prove interesting and valuable to the dentist, not only through its articles, but through the advertising section,

¶ We desire to thank our patrons for the support given our products in the past, and to wish them all a most happy and prosperous New Year.

**Claudius Ash Sons &
Company . . . Limited**

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Battle of Life

HERE are quiet victories and struggles, great sacrifices of self, and noble battles of heroism in it---even in many of its apparent lightnesses and contradictions--not the least difficult to achieve, because they have no earthly chronicle or audience—done every day in nooks and corners, in little households and in men's and women's hearts.

---*The Chimes*

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, JANUARY 1, 1913

No. 4

THE RE-COVERING OF THE NECKS OF TEETH BY MEANS OF AUTOPLASTY*

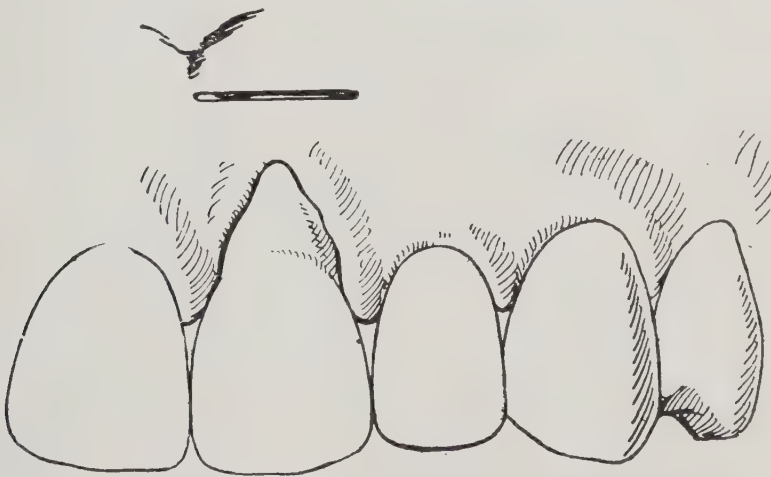
By Dr. P. ROSENTHAL.

The exposure of the necks of teeth, when it is not the result of a diasthesis or of a general pathological condition, can be overcome by a simple operation, which yields immediate results, and the benefit of which lasts for many years.

A gingival border which is everywhere normal may be affected to the extent of one or two teeth, which are then exposed in a noticeable manner. The mechanism of this exposure may be either an entirely local accumulation of tartar resulting from a local defect or from the masticatory act, or a violent traumatism which has profoundly injured the gum tissue, including the periosteum.

A tooth may also, by its condition, cause a lesion of the gum. The prolonged irritation which is caused by simple erosion,

FIG. 1.



Shows the recession of the gum from the neck of one of the teeth.

and still more by caries of the neck, are frequent factors in the lesion with which we are dealing.

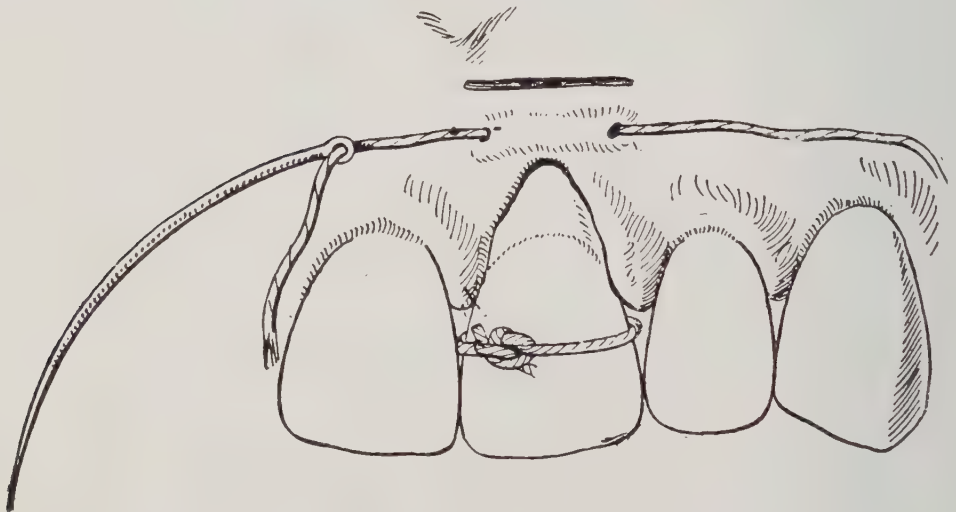
FIG. 2.



Shows the method of making the perpendicular incision.

Once the lesion has taken a strong hold nothing can suppress it, unless it be a surgical operation, the performance of which offers every chance of success, provided that the patient is young enough and enjoys good health.

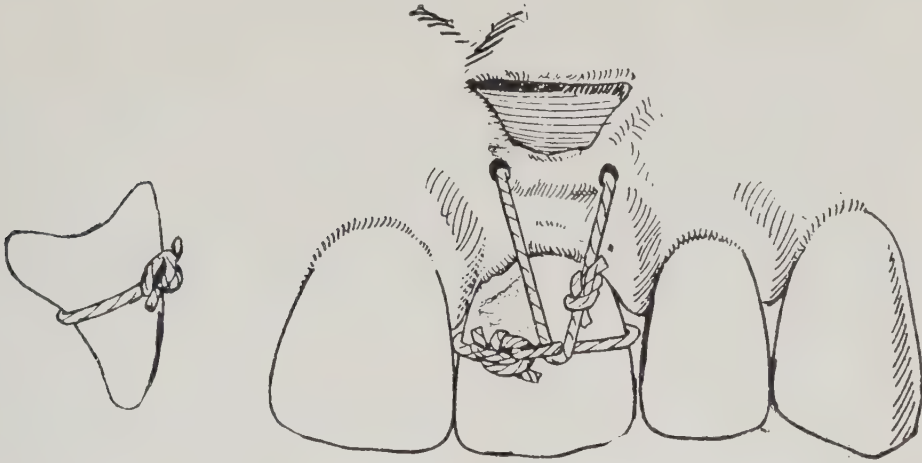
FIG. 3.



Shows the silk threads passed through the flap of gum and tied round one tooth.

Above all things, we must proceed to a very careful mechanical cleansing of the tooth, and likewise to the restoration of its contour

FIG. 4.



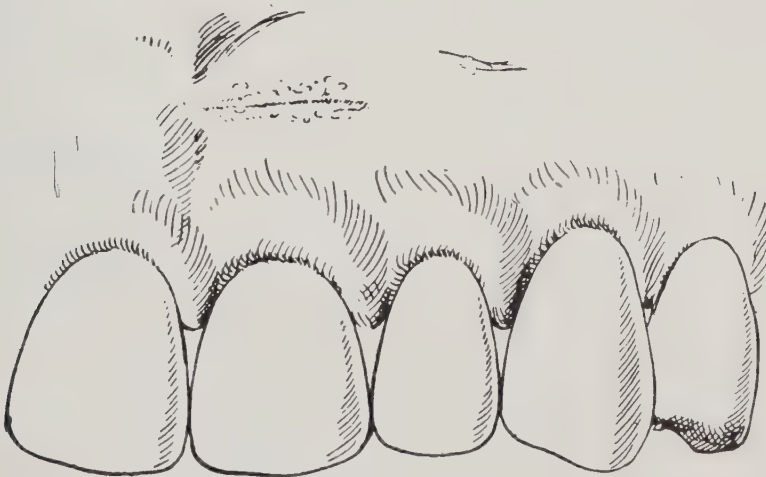
Shows the flap of gum drawn down to position on the neck of the tooth, and the little wound above the flap.

by means of a gold filling, if this be possible, because the gum will not tolerate the contact of other filling materials.

The operative technique is as follows: We commence by extensively painting the field of operation with tincture of iodine, which is the best antiseptic to employ in such cases. Above the tooth we make a perpendicular incision at its longest axis, and of the width of the tooth itself; the incision must be made sufficiently high to produce a good flap, in view of its vascularisation and of the future restoration of the normal gingival border.

The incision ought to be made sufficiently deep to take in the periosteum. We then follow on with a fine rugine and penetrate between the tooth and the flap in such a way as to separate the

FIG. 5.



Shows the case after completion, with the neck of the treated tooth re-covered with gum.

flap thoroughly and to make it capable of being moved; it must be carefully liberated upon the sides to its full extent, so that it can be easily moved. We then pass a well-sterilized silk thread through the flap and parallel to the first incision, towards the centre of the flap, and nearly the whole of its width. This done, we apply a second silk thread, which surrounds the tooth in its free portion. Before tying this thread, we pass one of the ends of the first thread between the tooth and its ligature; we tie the tooth securely, and draw the flap, by means of its thread, in such a manner that the detached portion of the gum covers the tooth only a little more than normally, on account of the retraction which will be caused through the cicatrisation.

When the thread has been well tied, we paint the wound anew with tincture of iodine, and we also paint the threads with it. This antiseptic treatment is repeated every day.

From the second day we begin with the massage of the gum in the direction of the longest axis of the tooth, in such a way as to promote the descent of the gum upon the tooth. By the fifth or sixth day we may remove the threads; at this period the cicatrisation is sufficiently advanced to prevent the flap going back. The little upper wound fills up completely, and we no longer perceive a trace of the operation. The gum has now definitely reassumed its normal position.

We have had under observation cases treated thus several years ago in which the results appear as successful as after the first month.

RADICIN IN THE TREATMENT OF ROOT-CANALS *

By DR. MED. EDGAR NEUMANN, of Vienna.

The literature of dentistry is replete with reports on antiseptic chemical agents which have been placed at the disposal of the surgeon, but very little advance has been made in the direction of preparations which would be serviceable in disinfecting root-canals.

Root-canals are not readily treated chemically. The agent must have a selective action, attack the pulp tissue more vigorously than the dentine, and it must cease to act upon the tissues beyond the end of the root.

The removal of the pulp or the cleansing of a canal is attended with some risk, and, judging from my efforts and those of others, the pulps can be extracted from all the single straight round canals, but as they become curved and flat the difficulty increases. There is the danger of breaking instruments in the canals; the danger of puncture and of pericemental irritation, and infection from instruments and chemicals.

I believe it better practice to leave some pulp in the canal than to risk irritation of the periapical tissues.

In 1874 Witzel recommended carbolic acid, which was followed by a series of other chemicals, viz., salicylic acid, iodoform, chlorophenol, thymol, bichloride of mercury, formalin, sodium-potash, etc.

In 1905 Callahan advised the use of sulphuric acid; later Arkovy muriatic acid, and Hayes aqua regia.

According to Grayston aqua regia is more suitable than a 50 per cent. solution of sulphuric acid, because it does not attack steel, and thus does not demand the use of instruments with platinum-iridium points.

For the last few years the oxygen compounds have been strongly advocated, owing to their germicidal and antiseptic properties. As regards hydrogen dioxide, Gellé has found that neutral hydrogen dioxide is readily decomposed, and that the quantity of acid added to its solutions does not ensure its preservation.

The limitations of hydrogen dioxide induced investigators to turn their attention to the so-called organic peroxides—they are peroxides in name only, for they are rather to be classed as anhydrides of acids—such as magnesium, zinc, and calcium peroxides. The 50 per cent. solution of sodium dioxide has also been used. Firth states that the 50 per cent. solution of Na_2O_2 is the best preparation to get the canals thoroughly clean, owing to its forming soap with the fatty constituents of pulp-matter, and that it is easily removed by repeated syringing with warm water.

Regarding the use of formic aldehyde, Bennette has shown that its diffusibility is but trifling, because of its coagulating action on albumen.

If we remember that the putrefaction of proteids produces substances such as putrescin, cadaverin, neuridin, and that we must remove both the products of putrefaction and destroy germ life, we shall understand that there may not uncommonly occur cases in which every method fails to effect a cure.

Harlan, who advised the use of monochloroacetic acid, says: "A pulp dies; perhaps the tooth is sore—at least, the pulp is offensive in smell. Very few of the drugs will reduce two gases, one to a solid and the other to a liquid. . . . Some of the poisons are so elusive and escape so freely, that it is impossible that a single or a double prescription will hit all of them. . . ."

Buckley adopted formalin-kresol, whereas Gysi was the first who made use of trikresol-formalin. In spite of its antiseptic properties the suitability of trikresol-formalin is limited by its instability and its caustic and irritant action, which not uncommonly causes inflammatory phenomena in the periapical region.

Hoffendahl made experiments in order to obtain sterilization of the root-canal by means of the electric current. Miller used the electrolytic treatment. By introducing a common salt solution into the root-canal and employing about three milliamperes of current, Miller succeeded in lessening the number of bacilli to a fifth, owing to the action of chlorine *in statu nascendi*.

This same idea has been promulgated by Boedecker when experiments were made with "electrozone"—that is, sea-water the salts of which are electrolytically changed, partly into hypochlorites, and partly into hypobromites. Brought into contact with organic matter, the chlorine is liberated and forms with hydrogen HCl, which has both a disinfectant and a bleaching power.

The valuable properties of chlorine induced Lepkowski to introduce Radicin, which contains hypochlorite of sodium (NaClO) and $\text{Na}(\text{OH})$. The main combination thus formed is HClO , from which Cl is liberated and unites with H , forming HCl .

Radicin dissolves organic matter, and, being neither a coagulant nor a solidifier, it has a penetrating power and does not act as a barrier to its further diffusion, like carbolic acid, silver nitrate, and other coagulants. Radicin does not discolour, but bleaches the teeth; it does not evaporate, like formalin; it is stable, and causes neither irritation nor pain.

In cases of pulp-decomposition with periostitis, in root-canal treatment with apicitis, Radicin shows both a rapid and a favourable action. About thirty-six hours after it has been applied, both pus and inflammation disappear, and even a badly infected tooth will be rendered quite odourless in two sittings.

As regards Buckley's method, I have to record only two successes in forty-one cases. In a recent paper Boenneken points out the disadvantages of employing kresol preparations, such as trikresol-formalin, for the reason that they are coagulants, and diffuse even through cement fillings. In molars I placed trikresol-formalin in the pulp-chamber—after having cleansed the tooth and

bathed it in alcohol—but I made no attempt to remove the contents or to drill into the root-canals. *Turavi in verba magistri!* I used faithfully and strictly the method as given by Dr. Buckley, who asserts that there is no necessity to drill into the canals, since there is still a store of trikresol-formalin in the chamber. Extraction had to be performed in five cases; in three cases pericementitis supervened. It was then that I realized the necessity of thoroughly cleansing the root-canals, but the results I obtained were in no way gratifying, as the patients complained of pains. I have seen so much trouble result from the use of the preparation that I would discourage its use if I thought the trouble arose only from its irritating properties. But I must state that in my practice trikresol-formalin has given but trifling results, and that it is a very unreliable preparation. During the nine months that I have made use of Radicin I have treated seventeen cases—of which five were combined with apicitis, and two with periapical abscess—without having had any report of after-trouble. Radicin is now my mainstay in the treatment of root-canals, and I have finally come to look upon it as a valuable preparation, on account of its antiseptic and germicidal properties, and, unlike many other preparations, its non-irritant action.

A SUGGESTION

A prominent Toronto dentist voiced a desire to us a few days ago for something that is not—a desire that to us had all the earmarks of necessity, based on common sense.

The writer had occasion to wait in the reception room of Dr. S., the last patient of the day being still in the chair. Naturally the reading matter to hand was the first object of attention. Magazines of the type we of the laity receive in our homes were in evidence, and proved of no more interest than they would have done to the average patient. One book, however, from its outside appearance looked interesting, and proved to be a scrap book containing such reading matter on the subject of dentistry as the doctor had been able to cull out from dentists' magazines, that would be of interest to the public.

After the business with Doctor S. was concluded, the conversation drifted to the reading matter on dental subjects that would interest the laity, and be of value to them as an educating agent, and the doctor's remarks seemed conclusive as to the need for such literature. The cuttings in the scrap book were pitifully few, and not altogether up to the ideas of Dr. S., but nevertheless they were of some value.

Since that time enquiries have been made of other practitioners along this line, with the result that there appears to be an opening for a small book, or a periodical publication that will supply this need.

One dentist averred that he would give \$5, nay, \$10, for a suitable little book that covered this field.

ASH'S EMPIRE CHAIR

The illustrations on the seven ensuing pages give an accurate picture demonstration of this chair.

Let us tell you of its virtues. The principal feature of an oil chair is the pump, and in this regard this chair is perfect. It has never been known to leak or settle, and if the operator continues to work the raising lever after the chair has reached its maximum height no damage is done. Not so with other chairs. Though substantially built, it is the lightest and easiest pumping chair made. In lowering, it does not reach the bottom with a thud—the receiving cushion allowing it to come softly and silently to rest.

In case of breakage of the pump spring, a new one can be inserted with the minimum of trouble in a few moments, and without the aid of tools other than a screwdriver. When the pump spring becomes stretched through constant use, a turn of the screw restores the regulating tension.

The disc base is thin, and allows the operator to stand close to the chair without discomfort. The upper body of the chair embraces all the most modern of ideas, as follows:—

Automatic back,
Clutch tilt,
Collapsible arms.

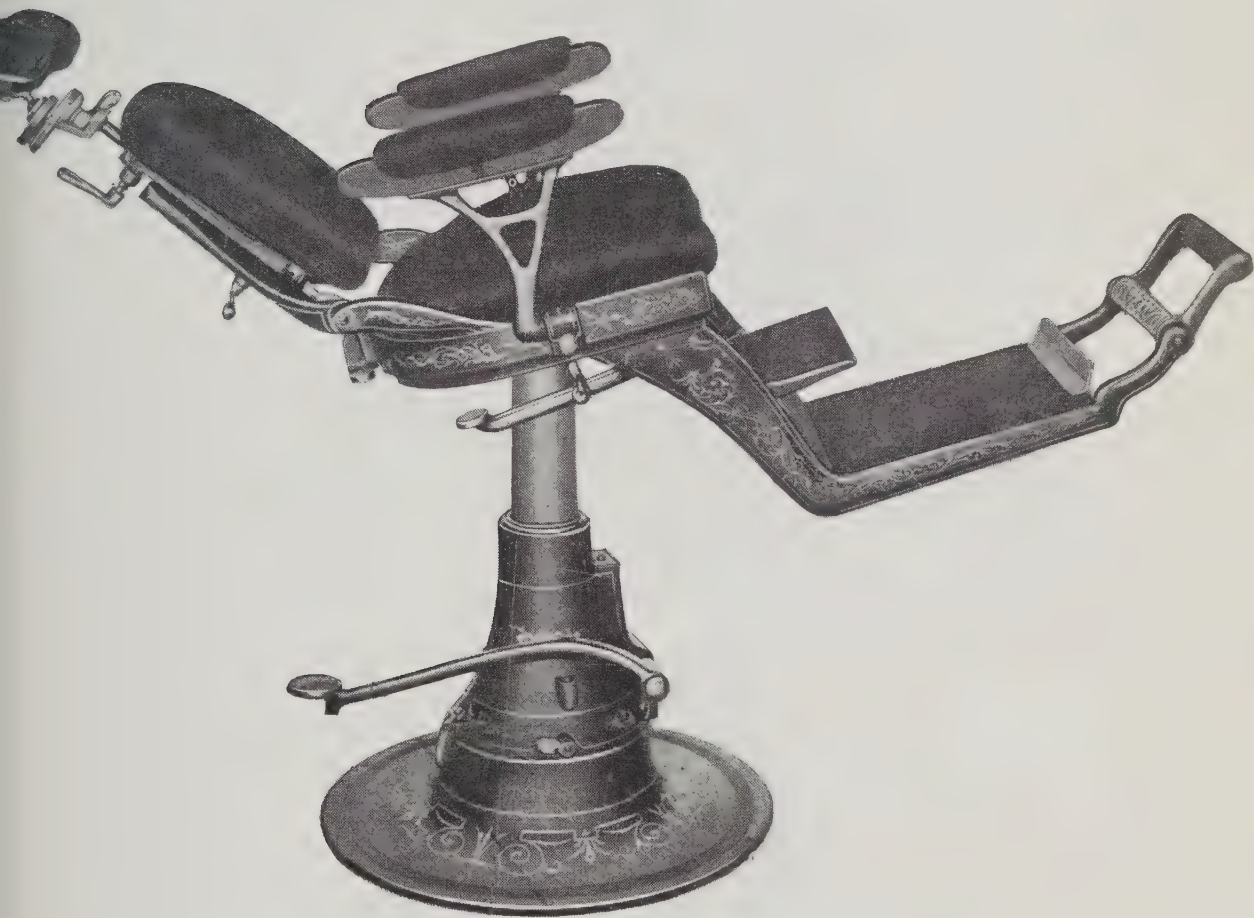
The japanning is the best possible, and the decorating the same, the gold work being all done by hand. The materials and workmanship are the very best, and the chair is a substantial British production throughout, and is absolutely guaranteed. The lines are graceful and pleasing, as demonstrated by the illustrations. This chair is of average range, and has been placed on the market to fill a long-felt want—A THOROUGHLY RELIABLE AND UP-TO-DATE CHAIR—at a price that has never been equalled.

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HIGHEST POSITION OF SEAT - 31 INCHES

LOWEST POSITION OF SEAT - 16 INCHES



This illustration shows the operation of the adjustable arms. The chair is also equipped with the Clutch-Back and Tilt. The famous Roll Head Rest shown, never works loose or gets out of order. It is most easily adjusted and its crowning victory over all other Head Rests is that it supports the patient at the base of the skull, and not at two small spots, as in the case of all Sectional Head Rests.

Ash's New Empire Chair with Roll Head Rest

Highest position of seat 31 inches. Lowest position of seat 16 inches.



This illustration shows how the dropping of the Arm makes a convenient seat for the operator. This Arm Seat will take with safety a 225 pound man. Another of our satisfied customers writes us as follows:—

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Ash's New Empire Chair with Roll Head Rest

Highest position of seat 31 inches. Lowest position of seat 16 inches



This Illustration shows chair in child's position. The Roll Head Rest solves the difficulty that presents itself to the dentist in working with the restless *little* patient. The head is held firmly in the Roll Rest and through the perfect support given, the child does not become so easily tired and restless as with the Sectional Rest.

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Ash's New Empire Chair with Wilkerson Head Rest

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Lowest position of seat 16 inches.



This Illustration shows rear view with lever arrangements. The right arm is dropped, but can be placed at any angle to the chair.

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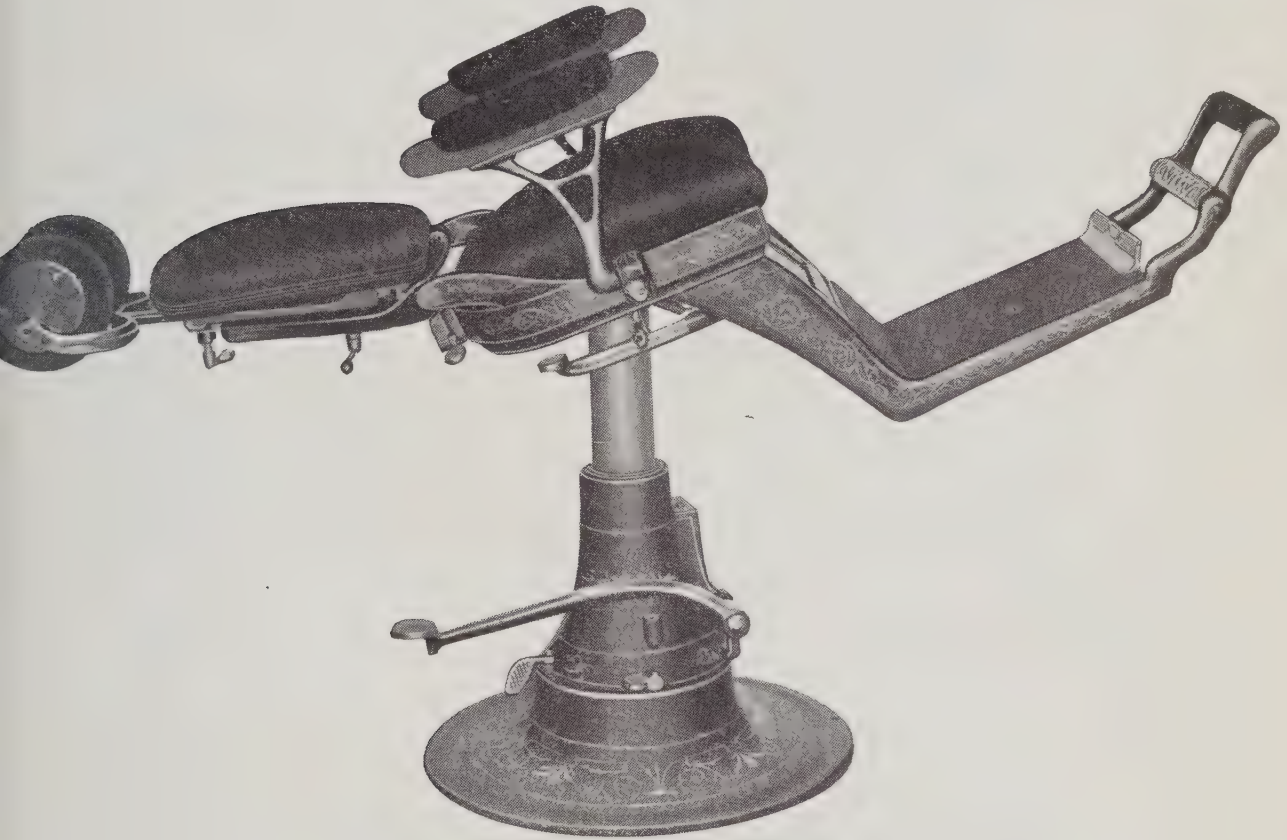
10% Discount allowed for prompt cash.

This chair is equipped with Clutch-Tilt and Back, giving no jar or jolt to the patient

Ash's New Empire Chair with Roll Head Rest

Highest position of seat 31 inches.

Lowest position of seat 16 inches



This Illustration shows the chair from a side view in an anaesthetic position. This position is attained with no jerking and jarring to the patient, owing to the Clutch-Tilt and Back. This Chair is beyond any doubt the easiest pumped chair extant.

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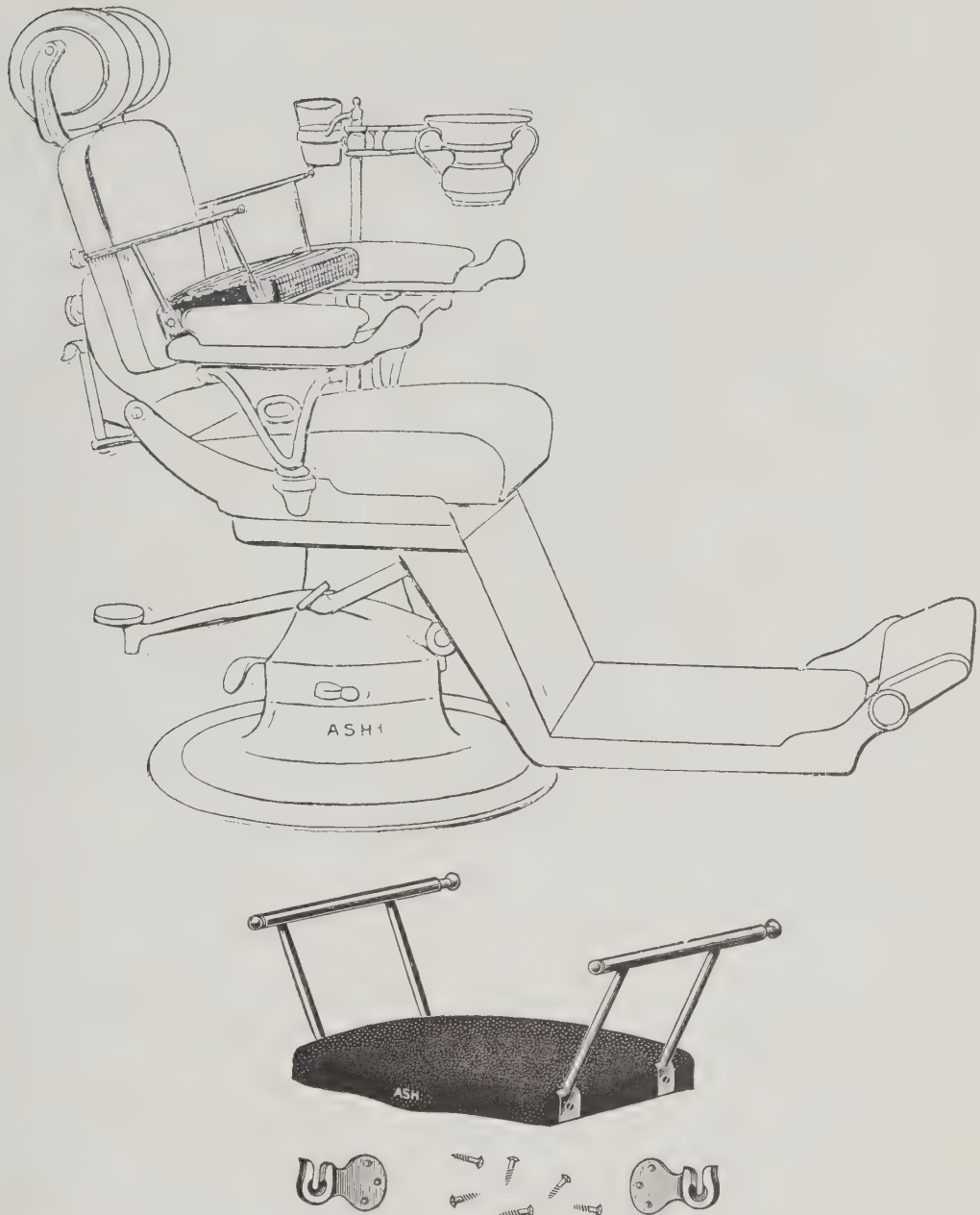
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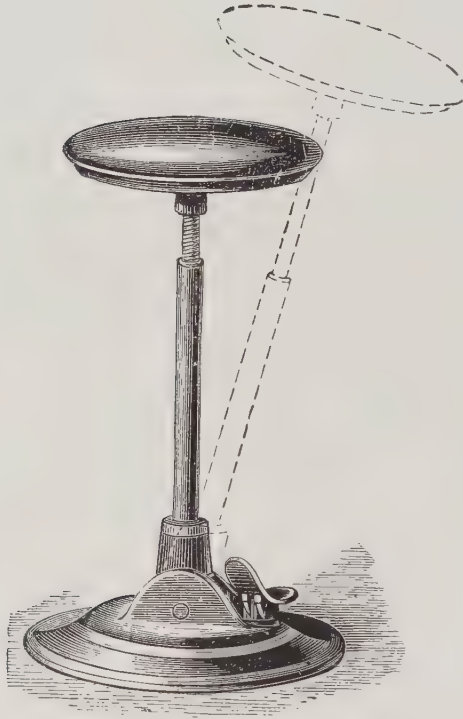
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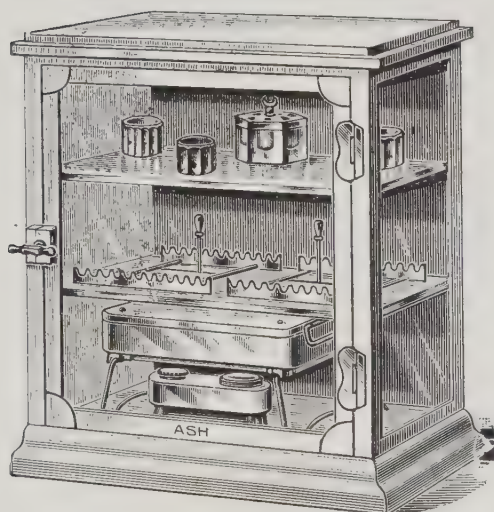
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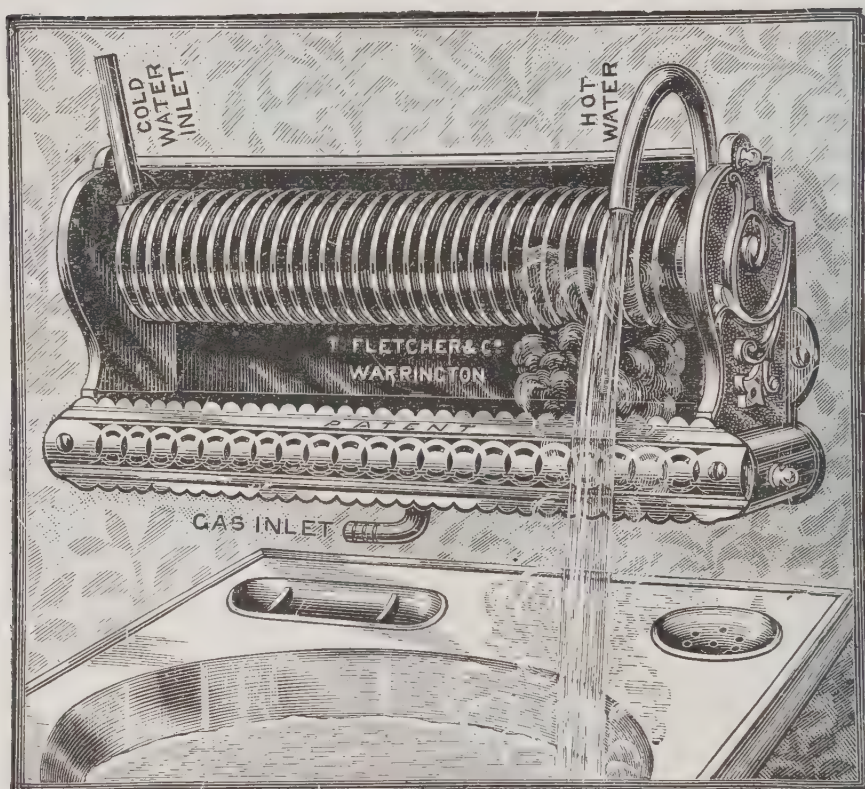


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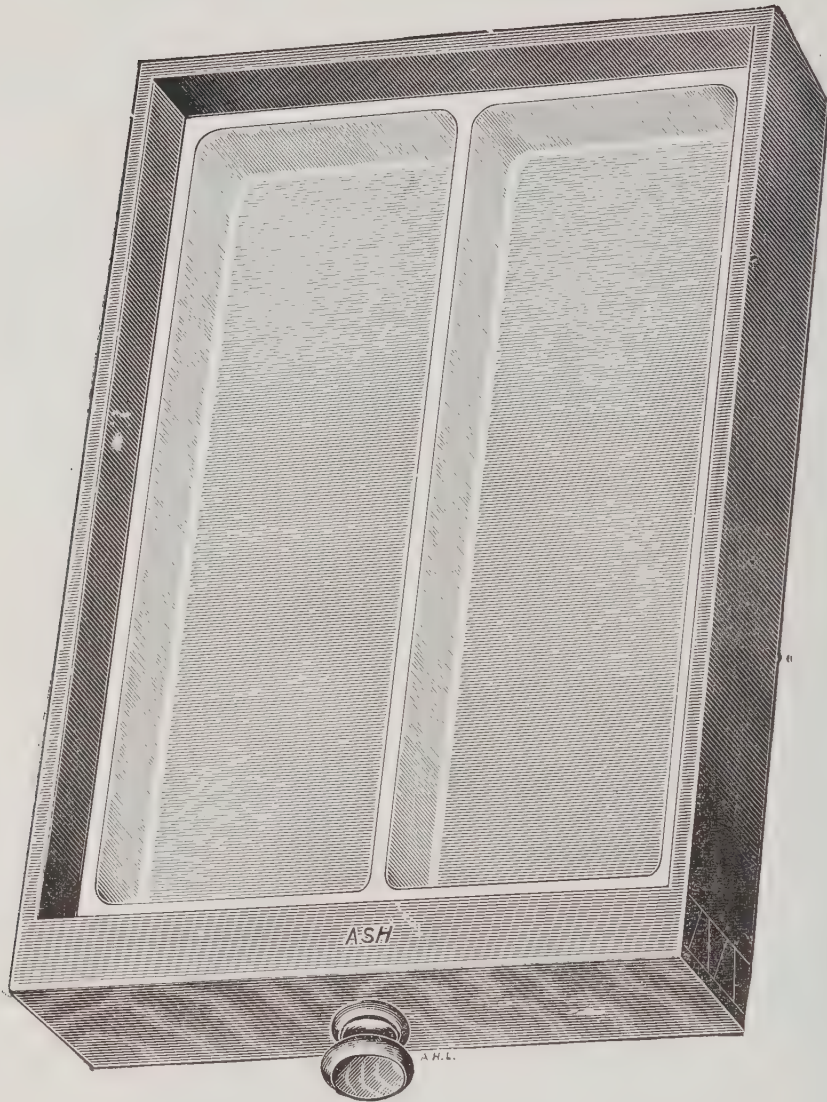
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Tray No. 4 is same as above, excepting that it has no division.

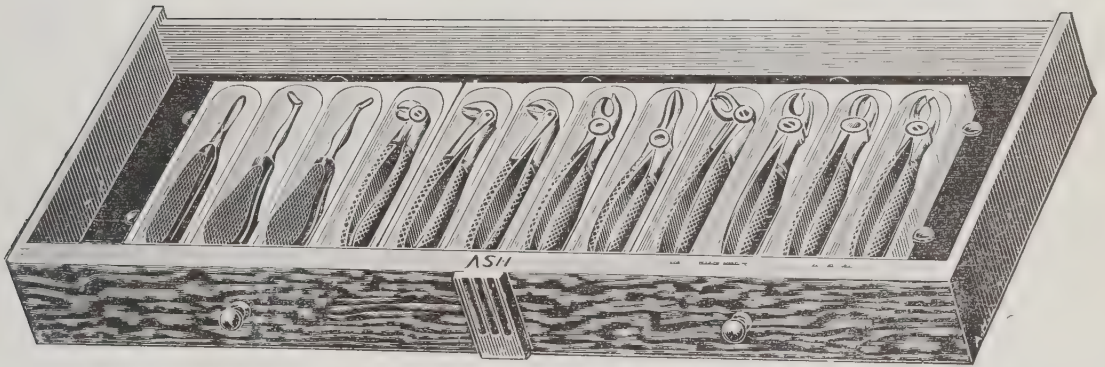
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No. 5



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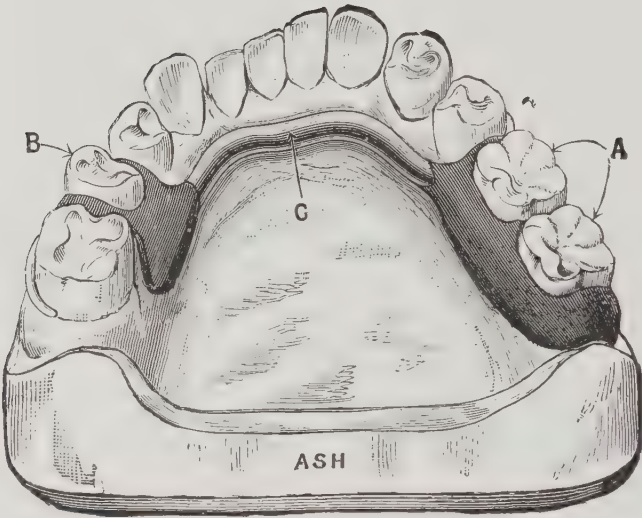
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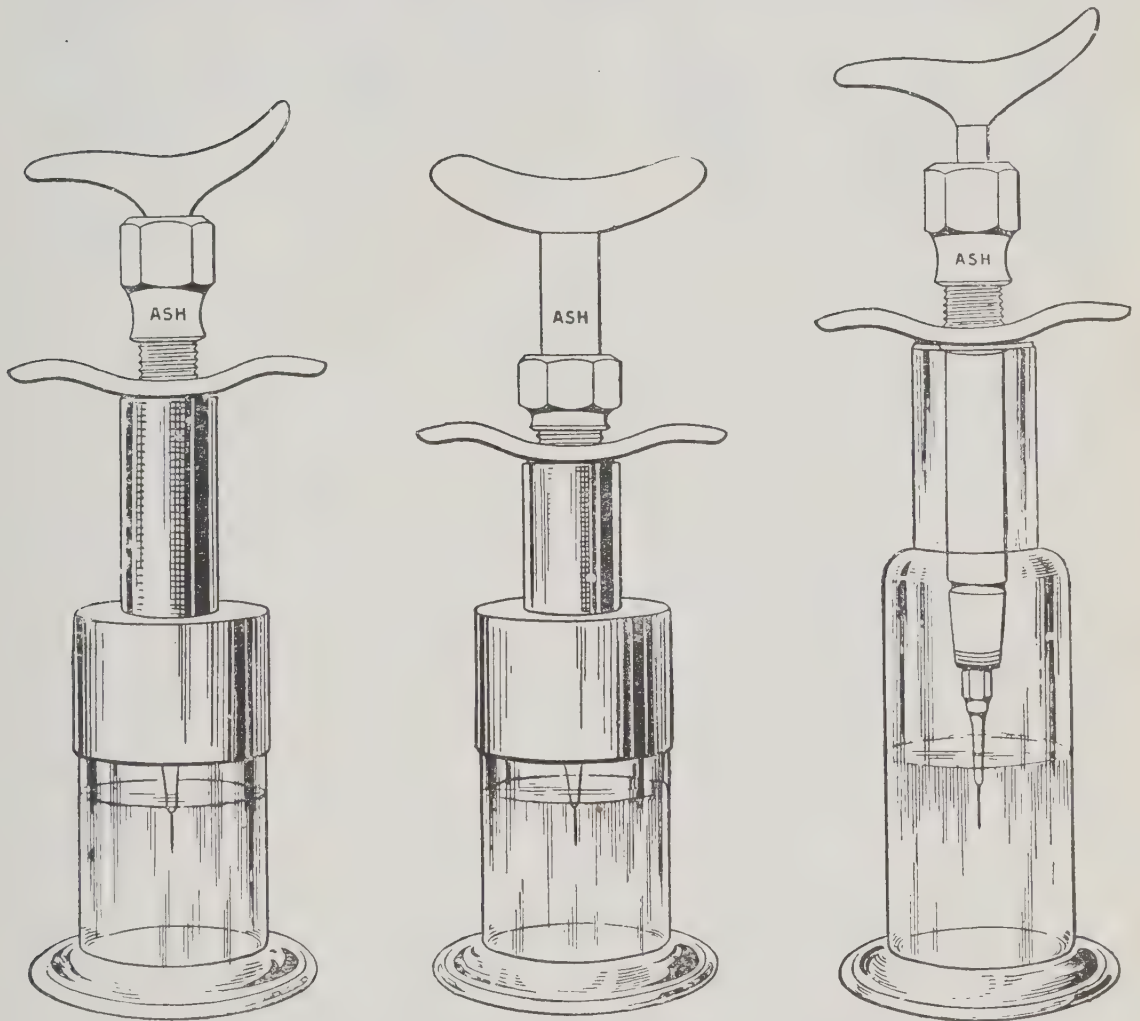
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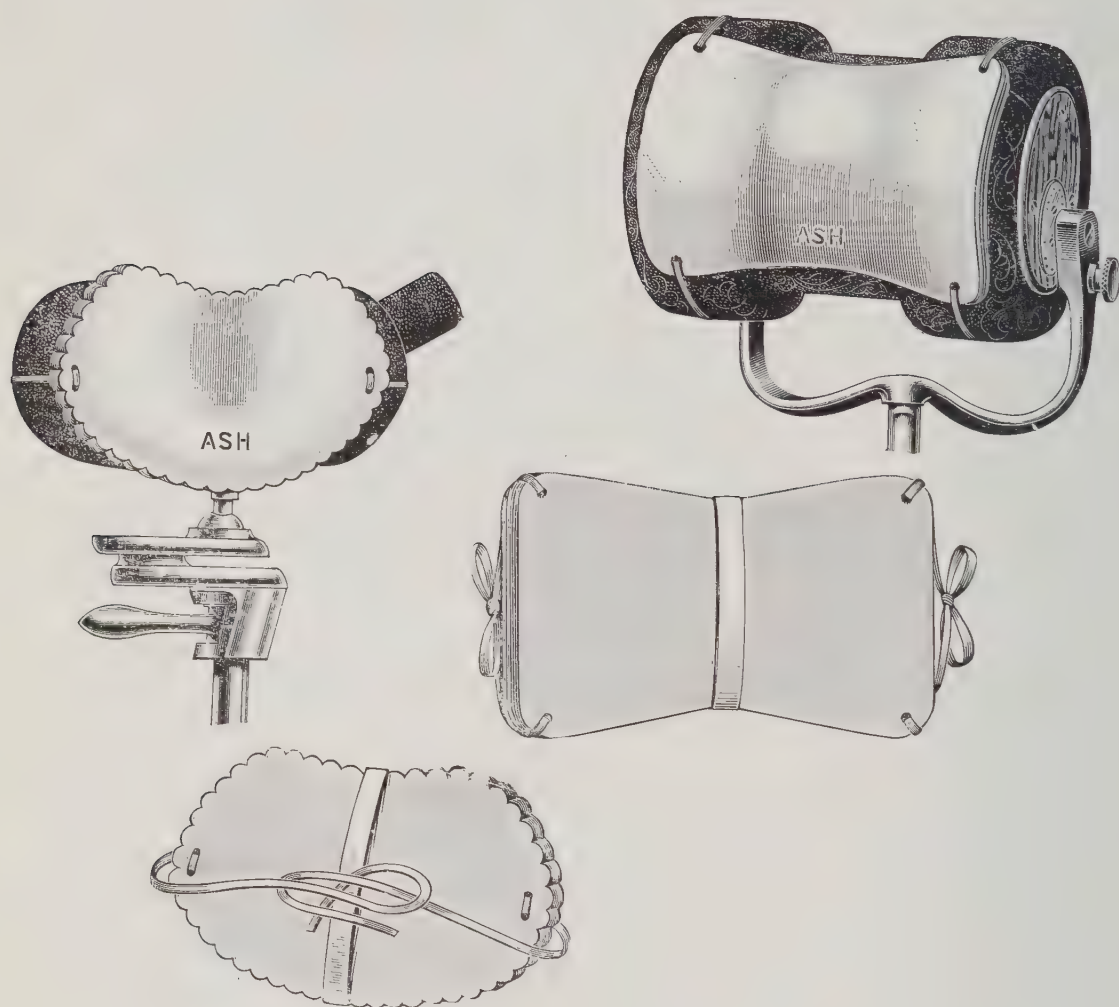


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(Lepowski)

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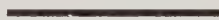
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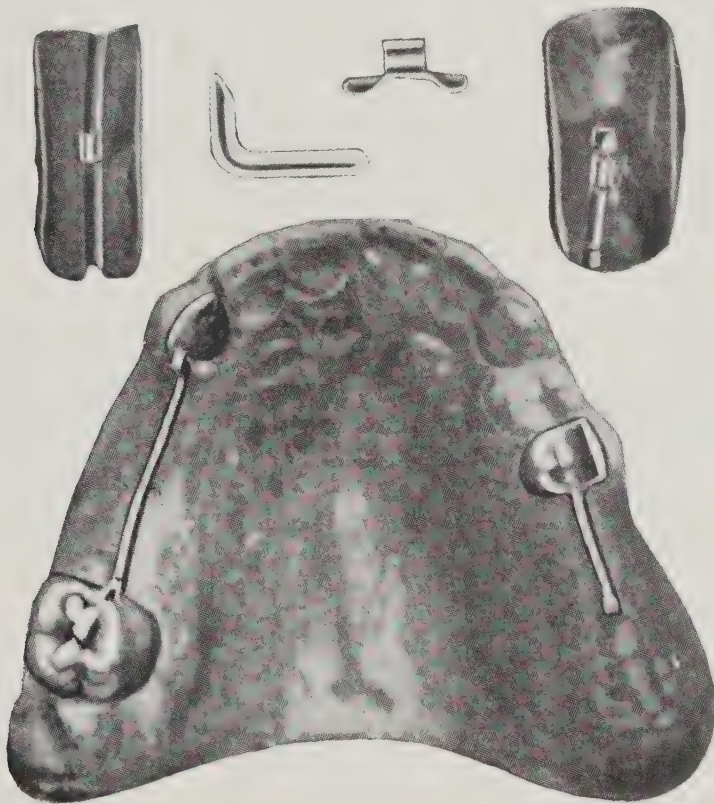
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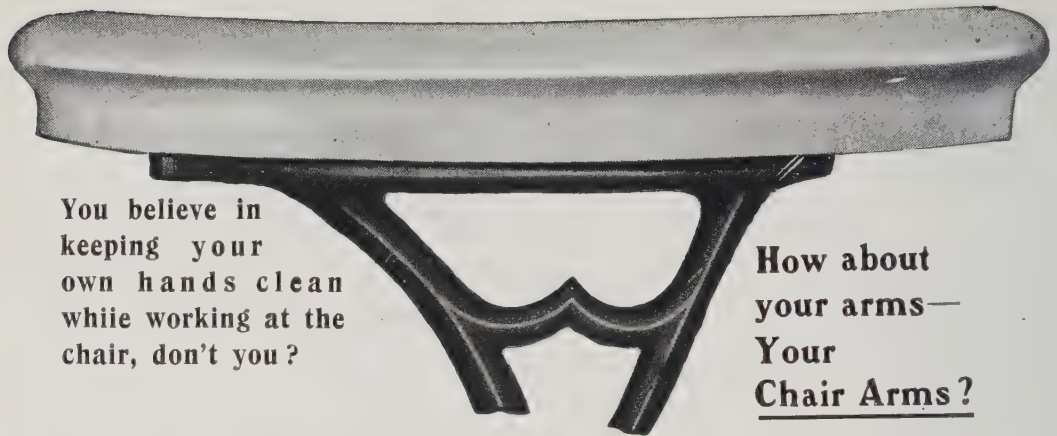
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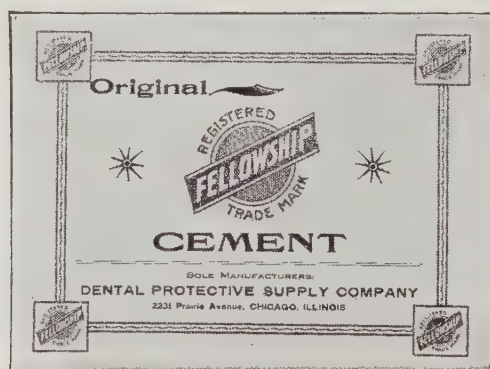
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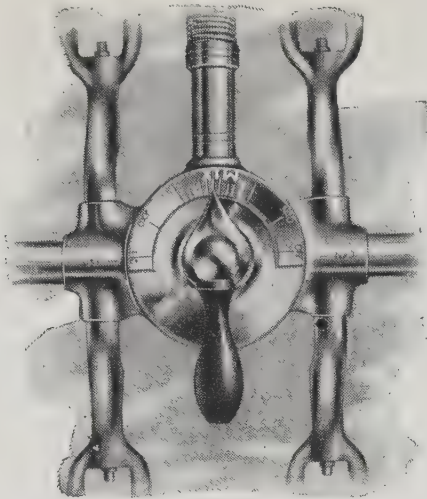
THE DIVIDING LINE

V

THIS SIDE

RED

(OXYGEN)



THIS SIDE

BLACK

(NITROUS OXID)

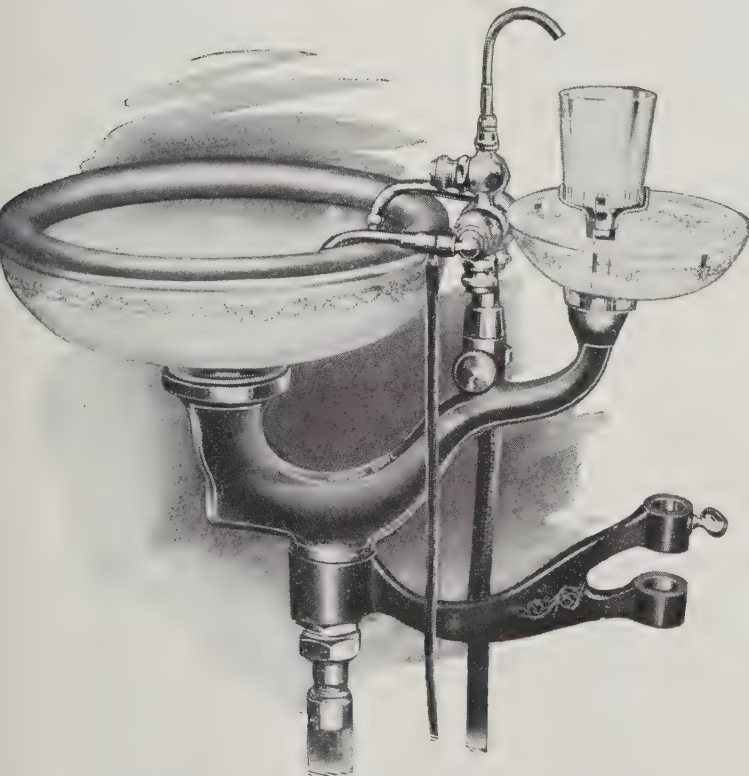
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The Flask Lifter and Bolt Sustaining Ring which have made the No. 2 Flask Presses so popular, are also incorporated in the new No. 3 Flask Press. The removable ring surrounding raised base serves as a support to the loose bolts, which should be placed in position before placing flask in press.

In connection with the handle this ring also serves as a flask lifter, by means of which the flask may be carried to and from a basin of hot water for softening the rubber.



PATENTED MARCH 17, 1903.

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GOLDS, are now issuing, FREE, a veritable

BUDGET OF GOLD KNACKS FOR THE GOLD WORKER

—a very comprehensive, useful little book of things that you once learned and have forgotten ; the little knacks taught only by experience and never included in a text book ; an indexed reminder of “just how you did it before” ; **not** a treatise on the easy, obvious things in gold manipulation, but an orderly reminder of the way through the mean little jobs that you run up against.

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Yours truly,

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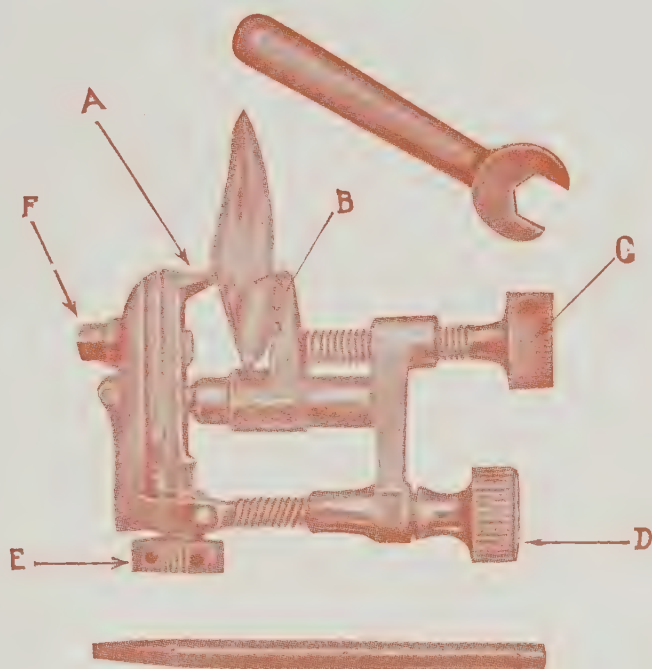
Send for “Ney's Gold Book.”

THE J. M. NEY COMPANY
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An Ideal Appliance for Removing
Crowns from Roots.

Registered.



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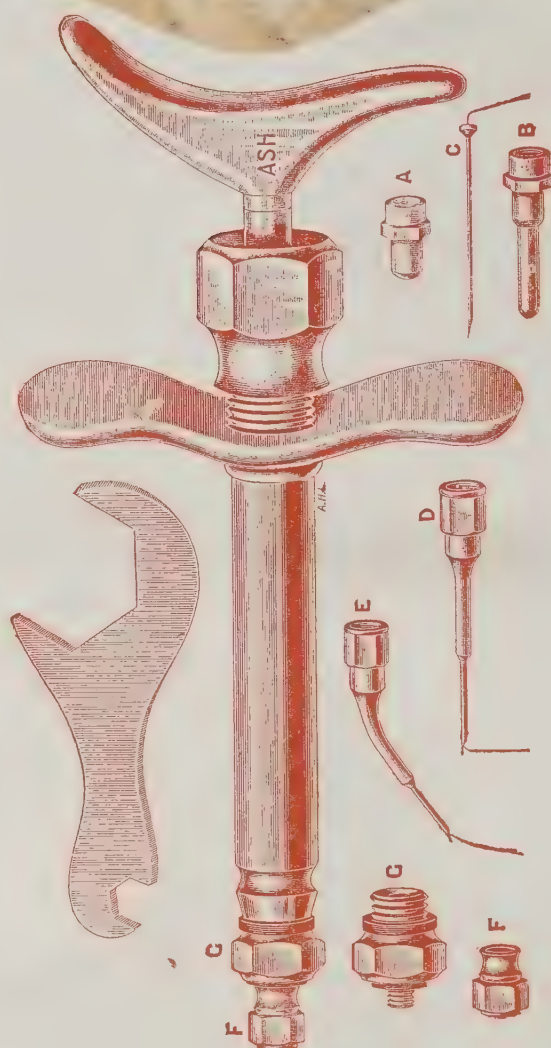
A slight turn to the right of Thumb Screw E removes the Crown, one Wedge Tongue pulling the Crown downwards, the remaining two supporting the root.

- | | |
|--------------------|----------------|
| A. Wedge Tongues 3 | D. Thumb Screw |
| B. Vice Jaw | E. Thumb Screw |
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Complete directions with each Remover.

PRICE - - \$5.50

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Ash's Imperial Hypodermic Syringe

This Syringe is a strong and accurately made British Article and will give you splendid satisfaction.

In neat cardboard box, \$2.00

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FOR DENTAL REPAIRS

Made in the principal patterns and sizes of our Flat Pin Teeth.

The three sizes of our Mineral Facings, here illustrated, are sufficient to show the distinctive feature to which we wish to draw attention, viz., the oval cavity in the back of each.

They can be used for repairing nearly every kind of denture; they are easily applied, exceedingly durable, and can be quickly fitted—it does not take longer than from ten to fifteen minutes to fit one.

They are invaluable for repairs to Bridges, and in all cases of Plate and Crown Work in which a flat tooth has to be replaced.

The oval cavity at the back of each facing corresponds with the positions of the pins in our Flat Pin Teeth. The facings do not require backing, but can be applied to the backing of fractured or broken teeth

when the broken portions of mineral have been removed from the backings.



83



71



14

DIRECTIONS FOR USE.

Chip away the remains of the broken tooth from around the pins in the backing, and roughen the backing with a suitable instrument or tool.

Make a thin mix of Ash's Lulay and Crown Cement, or other suitable Oxyphosphate cement, paint both the tooth backing and the new facing with a thin layer of it, press the facing firmly on the backing and keep it under pressure until the cement has thoroughly set.

Important Note.

On no account must any of the Silicate Translucent Cements be used for attaching our Mineral Facings to teeth backings, etc., because they are not sufficiently adhesive for the purpose.

Ash's Mineral Facings.....each \$.18

Ash's Mineral Facings.....per 100 15.50

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THE man who reviews his own life from page to page had need to have been a good man indeed, if he would be spared the sharp consciousness of many talents neglected, many opportunities wasted, many erratic and perverted feelings constantly at war within his breast and defeating him.

David Copperfield

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, FEBRUARY 1, 1913

No. 5

ON PROPHYLAXIS IN THE FIELD OF ODONTOLOGY.*

By PROFESSOR MATTI AYRAPAA, of Helsingfors, Finland.

When we are attacked by an internal disease, we are rarely able to indicate exactly when and whence the disease germ entered the body. When the disease is diagnosed it has already advanced, as a rule, to such an extent that its development can no longer be impeded—at all events, not completely. “In the same way as misfortune, disease does not approach us with bells round its neck,” as a Finnish proverb has it. It is different, however, in most cases with regard to dental diseases. The decay of teeth can be observed very early. It appears on the surface of the tooth as a small speck, which, in the course of months, or even years, gradually extends and penetrates deeper and deeper until it reaches the dental pulp and commences to cause pain. Dental decay, therefore, does proceed, as it were, with bells round its neck. Why do we not take notice in time of this warning voice of nature? Why do we not see it, although the danger is distinctly to be observed? The cause of it is partly ignorance, and partly indifference or want of means.

The modern dentist is obliged to give the greatest attention to these circumstances, viz., that dental decay, in consequence of ignorance or incapacity, has spread to a very great extent, although prophylactic treatment, rigidly carried out, might have been able to arrest its progress. It is not sufficient for us to treat diseased teeth and to construct artificial ones cleverly; we serve mankind far better if we are able to prevent the occurrence and the spread of diseases.

Let us take an example. When an epidemic of malaria breaks out, we are able, it is true, to cure those attacked by means of large doses of quinine; the disease, however, spreads all the same. If we explain to the public that the *Malaria plasmodium* is developed in the salivary gland of a species of fly (*Anopheles*) and that through the bite of this fly it reaches the blood of man, we teach

*Translated from the *Schweizerische Vierteljahrsschrift für Zahnheilkunde*.

mankind to avoid the source of the disease itself, and thus accomplish a far greater work than by the treatment of individual cases of disease.

Now let us glance at tuberculosis. In the small dwelling-houses of workmen in the country and in towns, the healthy and the sick live together. They spit upon the floor, and the dried-up sputa, filled with the bacilli of tuberculosis, are stirred up with the broom, rise into the air, and are directly inhaled into the lungs; or the little children crawl about upon the floor and make their fingers dirty with the expectorations of the sick; thus the bacilli penetrate into the mouth and from thence into the alimentary canal, or attach themselves to the mucous membrane of the mouth, or enter the cavities of hollow teeth, there to develop and multiply, in readiness to penetrate, at the first favorable opportunity, into the lymphatic system or into other tissues and to begin their work of destruction. It has been calculated that in Finland we have at least forty thousand people affected with tuberculosis, of whom eight thousand five hundred die annually. How many of these have been infected through the mucous membrane of the mouth or through the teeth it is impossible to decide, but we should think that the percentage would not be slight when we remember that, according to a statistical table put together by one of our dentists some ten years ago, about 92 per cent. of the school children possessed defective teeth, that 60 per cent. of them suffered from swollen lymphatic glands, from the size of a pea up to a hen's egg, and that these swollen glands were always found upon the same side of the mouth as the diseased teeth. These pathological alterations may often be caused through the bacilli of tuberculosis. If we consider the large number of sufferers, what is the value of a few sanatoria which contain, perhaps, 200 patients, even if from 60 per cent. to 70 per cent. of these should recover? And yet, looked at from the prophylactic point of view, they are of the greatest importance. The patients learn in these institutions how their disease is treated, how its transmission from one to another can be prevented, and they spread this knowledge throughout the land. Let us assume, for instance, that the number of patients amounts to 200, and is renewed three times a year. This means that 600 patients are annually treated in the sanatoria. Let us further assume that every one of these 600 patients tells twenty acquaintances of the treatment, etc. Within a year 12,000 persons thus become partners in this knowledge, and they, on their part, spread it, while new patients are taken into the sanatoria and in due course dismissed. In this way the knowledge, so important in the treatment of tuberculosis, is spread unceasingly among the people.

To the extent that science becomes clear in regard to the etiology of other diseases, it is the bounden duty of the physician to make known to the people the knowledge of suitable prophylaxis based upon this etiology. Let us, from this standpoint, touch in a few words upon lues, a disease the excitant of which, in all probability,

is a spirillum (*Spirochoeta pallida*) which also frequently occurs in the mouths of patients. It is our duty, as dentists, to recognize the forms of this disease which appear in the mouth, so that we may be on our guard, not only for our own personal safety, but also for the safety of our patients, and that we may not transmit the disease to others with our instruments or by our hands. In connection with this disease we are often able to prevent the occurrence of certain complications. I mean the so-called stomatitis. During the anti-syphilitic treatment it is extremely important to keep the mouth and the hands clean. In regard to this I cannot forget the advice of old Siegmund v. Illanor. He, if I am not mistaken, died at the age of 80, and was able to deal with this disease through several generations. He expresses himself in one of his last works to the effect that in his private practice he should only be carrying out a superficial cure unless the patients had previously visited a dentist, whose duty it was to cleanse their teeth carefully, to remove all roots and teeth which could no longer be filled, to fill defective teeth, and to replace those which were missing with new ones. This man, in his time one of the greatest specialists of the world, therefore held healthy views in regard to the prophylaxis of mercurialism, which we dentists must support with our fullest conviction. What Siegmund demanded from his rich private patients surely the awakening public authorities will demand from their clinical patients, by appointing special dentists whose duty it will be to treat the teeth of patients, free of charge, in the hospitals, and particularly in the syphilitic wards.

In regard to the remaining infectious diseases, we must remember that many excitants of disease live in the mucous membrane of the mouth and in the teeth, and are capable of multiplication before entering into the body—for instance, diphtheria, pneumonia, typhus, and cholera bacilli. Not only at the commencement of the disease, but also at its conclusion, when the patient has looked upon himself as restored for a long time, germs of disease may be met with in the mouth which are completely virulent and capable of transmitting disease. It is self-evident how important the cleansing of the teeth is during such epidemics, in regard to prophylaxis.

It has been observed that the Löffler bacillus (diphtheria bacillus) may still be found in the mouth from ten to forty days after the deposits of skin have peeled off.

Sometimes an epidemic of diphtheria may entirely run its course without symptoms of disease. Thus Eric Müller cites a case from a Children's Home where, after all the children had been examined, a Löffler bacillus was found in a child which had been admitted shortly before, without the child feeling ill in any way whatever. On the following day the bacillus was found in a few other children, in every case in the children whose beds were nearest to that of the affected child. After a few days the bacillus was spread to all the forty children who slept in the same dormitory. The bacilli, however, produced no disturbances or symptoms of disease.

I will mention another disease for which we dentists must keep a sharp look-out when it occurs in our surroundings, viz., measles.

Here we can likewise be useful in a prophylactic sense. To the symptoms of this disease, before the others have appeared, belong the so-called "Koplik's signs." They are small red specks, with a bluish white point in the centre, which appear on the inner side of the cheek and lips. These specks occur before the disease has become infectious. If, therefore, during the treatment of the teeth of a child we find these Koplik's signs, it is our duty to demand that the child in question shall be separated from the other children in the family; we can thus with great certainty avoid the spread of the epidemic, at all events in this individual family.

Now, if we look more closely at the prophylaxis of the real dental diseases, the most important which first meets us is the decay of the teeth—*Caries dentium*.

In the study of the prophylaxis of dental decay we must first be clear in our mind how nature seeks to protect itself against this disease. Among civilized peoples it has spread to a very high degree, so that we only rarely find a person whose whole set of teeth is sound. Among the youth of our schools we have more than 92 per cent. of bad teeth, and in Europe there are places where this percentage rises to 100; that is to say, every individual is affected to a more or less extent with dental decay. There are, however, peoples in which this disease occurs comparatively rarely. Among our Laplanders it hardly exists at all, if we may judge by the great collection of crania in the possession of the Finnish University. Nature seems, therefore, to have means at its disposal for resisting this disease.

When we look at the skulls of the Laplanders, we are surprised to find that the teeth are worn away to a great degree, often up to the neck of the tooth. In such skulls as those in which the deciduous teeth are still present, therefore in the skulls of children, we also find the same conditions; the teeth are worn away up to the gum. As we know, Laplanders, during the greater part of the year, live chiefly on dried reindeer flesh, which, as it is hard and tough, they are obliged to gnaw away and tear off from the bones.

Furthermore, Mummery, on the basis of comparative studies in the collections of skulls of various museums, has tabulated statistics in regard to the spread of dental decay in various peoples. He found that caries occurred among the Eskimos only to the extent of 1 per cent.; among the Indians, from 3 to 10 per cent.; in the Malays, from 3 to 20 per cent.; in the Chinese, 40 per cent., and in Europeans, from 80 to 98 per cent. In addition to this, Mummery speaks of a people who are a mixture of Spaniards and Indians, viz., the Gauchos, of the pampas of South America, who live exclusively by raising cattle. Their chief nutriment consists of meat which they roast over a fire and tear from the bones with the teeth. Among these people dental decay is said to be almost un-

known, although as descendants of Indians they should have from 3 to 10 per cent., and as descendants of Spaniards at least 80 per cent., of caries. If these statements are reliable they point to the fact that the teeth, even if, as among the Europeans, they have degenerated, may be improved in later generations if the conditions of life become more favorable.

What are the most suitable conditions of life under which we are able to cause the progress of caries to decrease? In other words, what is the prophylaxis of nature against caries? It is Work.

Only by means of work are we able to strengthen the corporeal organs. Athletes and workmen gain powerful muscles; and, inversely, if we do not exercise our organs they become stunted and degenerated. If, for example, the arm of a child has been injured, and has been borne idly in a sling for a few weeks, it will be backward in development; the other arm will be stronger and more developed, not only because it is more healthy, but because the child has been able to move and exercise it. In the Bible we read: "In the sweat of thy brow shalt thou eat bread"—that is to say, by performing heavy work. This heavy work is not to be taken to mean collectively; it has reference to every bodily organ by itself. The condition of the entire organic life is work. Non-use produces degeneration both of the entire organism and also of the individual organs. All organs must perform a certain work; the heart works, the lungs work, every blood-cell is in diligent activity. The teeth of man also degenerate when the accomplishment of their work is left to a great extent to male and female cooks; their power of resistance decreases, they fall a prey to dental decay, and dental decay is a wound on the human body—a gaping wound which nature cannot cicatrise or heal like other wounds, but which becomes unceasingly greater, and holds the doors open through which all kinds of bacilli and disease germs penetrate into the body, there to perform their work of destruction.

How are we to understand that work in itself will preserve the teeth from decay?

The work of the teeth consists of mastication, and powerful mastication brings with it two important components—the cleansing of the teeth and the increase of the activity of the glands, especially the salivary glands.

During mastication, particularly of hard nutriment, the teeth are better cleansed mechanically than with any tooth-brush whatsoever, and the glands secrete profuse saliva and mucous. Should remnants of food remain between the teeth or in the natural depressions of the teeth, the mucous secreted by the mucous membrane glands makes them slippery, so that the saliva pouring profusely from the salivary glands is able to carry them away; and should smaller remnants of food remain for a longer time between the teeth and ferment, the alkaline saliva neutralizes the acid (lactic acid) which is formed during fermentation.

How important strong alkaline saliva is for the protection of the teeth against the deleterious influence of the lactic acid which is formed in the mouth is proved by the experiments recently carried out by Head. He placed sections of teeth in a weak solution of lactic acid (one part lactic acid to 500 parts of water). The sections were dissolved after a few minutes. When, however, in lieu of water, he employed saliva—that is to say, one part of lactic acid to 500 parts of saliva—the sections remained unaltered for weeks.

The protecting power of the saliva does not, therefore, lie in its antiseptic qualities. Its capacity for killing micro-organisms seems to be very slight, if it exists at all. We know that even in a healthy mouth great masses of bacteria live, and that their number is incalculable when the gum and the teeth are diseased. The saliva does not kill them, for among them there are no doubt also useful species, although we do not know them or their functions with exactness, but the saliva lessens and neutralizes the damage which the products of the bacteria are able to produce.

The protective action of the saliva is probably still more extensive. The serum theory, with its new method of viewing things, its new materials, its toxins and anti-toxins, precipitants, agglutinins, allexines, complements, aggragins, opsonines, and so forth, will no doubt discover new fields, in regard to the saliva, and afford us a glimpse into the secret workshops in which nature produces its means of defence in the battle for life. And in this battle, judging from all we know, there will be a large number of species of bacteria which are our allies, even if others are, and will remain, our irreconcilable enemies. When we speak of the prophylactic means of nature itself in its fight against dental diseases, we must on no account forget the activity of the tooth marrow—the pulp. If we come back again to the skulls of the Laplanders, previously mentioned, we shall remember that their teeth were often worn away up to the gum. In such cases we might fear exposure of the pulp cavity, since the entire upper part of the tooth, and even more, has disappeared. This, however, is not so. To the extent to which a portion of the tooth is worn away the pulp builds up new dentine—the so-called protective dentine—against the threatening danger. In the same manner the pulp seeks to battle against the commencing dental decay. As soon as the decay has obtained a secure hold in the tooth and has commenced to send out its precursors—that is to say, its toxins—along the dentinal canals in the direction of the pulp, the pulp likewise commences to be intensively active. It decreases the number of dentinal canals which, in healthy teeth, run in dense numbers from the periphery towards the pulp, and only leaves the hard basal substance, which the bacilli have to dissolve before they are able to penetrate further forward. At the same time the pulp builds new dentine—protective dentine—between itself and the threatening dental decay, just in the same manner as it builds against wearing away. It erects walls or barricades against the numerous troops of enemies—the bacteria—as one does

during war; and, what is more wonderful still, it builds in this protective dentine only few dentinal canals, and these run crookedly and zig-zag, so that the bacteria and their poisons find it difficult to penetrate forward along them. How this battle finally ends, however, the present generation knows only too well. The resisting power of the pulp decreases, and if dental aid is not called in betimes the tooth is doomed to destruction. Nature's own prophylactic means against dental decay are therefore, first, work, or powerful mastication, and from this consequent cleansing of the teeth and a profuse exudation of alkaline saliva, also the activity of the dental pulp, or its ability to form between itself and the approaching dental decay new protective dentine.

By work—that is to say, by means of powerful mastication—the maxillary bones, masticatory muscles, teeth, lips, and laryngeal muscles, are strengthened, and the blood current becomes stimulated—in a word, the development of all tissues proceeds more rapidly than it otherwise would, and the histological structure of the teeth is certainly made stronger.

It is true that Black, on the basis of exact chemical analysis, has sought to maintain that there is no difference between so-called good and bad teeth, as in the ash of both tissues the same masses of lime and other materials are found. In my opinion, however, the strength of the teeth does not depend upon the number of lime molecules found in the ashes of teeth, but upon their chemical and architectural constitution as it occurs in the living cell. With the same number of bricks we can build a house which is strong and secure, but we can also build one which will fall down of its own accord. From the ashes of teeth we are able to calculate the percentage of carbonate and phosphate of lime contained therein, but do not know even in what combination the lime occurs in the tissues. We do not know the chemical constitution or the architectural structure of the lime molecule, nor do we know how they are added to each other, or whether they are more closely attached at one time than at another. Upon these circumstances the strength of the teeth may be dependent, and not upon the percentage of lime in the ashes. Every practical dentist must agree that the teeth which are treated by us appear very varied. Some of them cannot be penetrated by our sharp instruments, whereas in others the instrument enters with ease.

After having described the various measures which nature herself utilizes in a prophylactic sense against the causation and spread of dental decay, we approach the measures which the community, the family, the individual man, and also the dentist, have to take up in order to avoid the destruction of the human masticating apparatus. In this matter we must first take counsel with nature. We have seen from what has already been said that the best protective agent of nature against dental decay is hard work—that is to say, the masticating of hard and tough nutriment. The desire for comfort and enjoyment of the modern civilized man can scarcely

be put a stop to—at all events, not to so great a degree that he will employ as much time and take as much trouble in mastication itself as, let us say, the peoples who stand on a low stage of development. It is almost unthinkable that civilized man will again take the great trouble to gnaw very laboriously very dry, tough flesh like, for instance, the Laplanders do. No; he will have it chopped, cut, spiced, and so softly cooked by stewing or roasting that it almost melts on the tongue. The work which nature has ordained for the mouth and the teeth, civilized man has, to a great extent, delegated to the manufacturers of foods of every kind—to the sausage-shops and to cooks. A return to the simple, primitive manners is certainly impossible.

Many great thinkers have, of course, considered that a return into the lap of nature is the only safe course for mankind to take against decay and degeneration. The doctrine of Jean Jacques Rousseau in this connection is the most radical. According to him civilization is the misfortune of the human species. It produces all the misery which is hidden under the illuminating disc—the sun. Back, therefore, to the primeval condition; let the manner of life of the wild peoples, aye, even that of the animals, be our prototype.

Nevertheless, it is, perhaps, Utopian to believe that the human race could, or would, return to the primeval condition.

It is true that civilization possesses many shady sides, in regard to the spread of dental decay, particularly in the hygienic conditions of the great cities and in the regions of the great industries. But it has means at command with which to paralyse these noxious influences.

Through the spread of knowledge much can be accomplished. As the health of man is his greatest fortune, upon which his existence altogether depends, we must lay much greater stress than we have hitherto done on the instruction in the school, in regard to hygiene.

It is not enough, however, that such instruction is given. We must also see that the counsel which we tender is followed. In regard to the teeth of children, it is necessary to examine them annually, to repair all defects and deficiencies, and to insist that daily careful cleansing is carried out. Henceforth it is the duty of the authorities in large cities and communities to appoint, for the youth of our schools, their own doctors and dentists, who, in the interests of the commonweal, will control the condition of the health of the children and give it the necessary care. The second duty of a community is the procurement of good drinking water. On the basis of extensive and exact calculations, Röse has demonstrated that hard drinking water, rich in lime, is an extremely important factor for the development of the teeth. The harder the drinking water is in any given locality, the less is the number of defective teeth. In a district where hard well water was employed for food and drink the existence of 18 per cent. less defective teeth

could be demonstrated than in a neighboring district where the drinking water consisted of soft river or sea water.

This statistical study of Röse, which comprises more than 100,000 children in various districts, appears to me to be an indication of nature that in many districts the development of youth is hampered owing to the lack of so-called earthy salts—lime and magnesium. Endeavors have been made to maintain that most foods contain as much lime as man requires for the building up of his bones, but later physiological investigations have shown that the heart, in order to carry out its function, needs lime salts every moment. The heart of a frog, if removed and placed in distilled water, ceases to act after a few minutes. If, however, we dissolve in the water inconsiderable masses of mineral constituents, such as lime, magnesium, potassium, and sodium, its function begins anew; it contracts and distends for many days. Lime and other mineral constituents of the blood must therefore be considered important articles of nutriment for the body, just as much as the carbon hydrates and albumen.

Robert Tigerstedt says: "By these observations it is, therefore, proved that the ash constituents of food are as important for the maintenance of the body as the combustible combinations contained therein; indeed, from the experiments carried out, it seems to follow that the grown-up body can more easily bear complete starvation than the ash hunger by itself."

We do not know yet in what form lime occurs in the metabolism; probably it is resorbed in organic combinations. Man receives from drinking water and from milk a great portion of his lime needs, as well as from foods of the vegetable kingdom, such as potatoes, turnips, carrots, cabbage, peas, and other vegetables.

It happens, however, that the lime contents of these foods disappear or decrease to a great extent if they are boiled in soft river or sea water. The lime salts become dissolved in the water and are poured away with it. It is different when hard water is employed for cooking: the lime salts do not become soluble in it; on the contrary, the vegetable takes to itself more lime salts from the hard water, and consequently obtains a greater nutritive value.

Children frequently eat raw in preference to cooked vegetables—carrots, for instance. This may perhaps be a hidden hint of nature to the effect that children, in the stage of development, require more of such materials as are present in the uncooked food than adults, as, for example, lime salts, which disappear during the cooking of the food.

Moreover, from Röse's investigations, we learn, for instance, that nearly the entire amount of lime in potatoes which are peeled and cooked in soft water is dissolved in the water. When the potatoes are unpeeled the lime is maintained in them, especially if they are cooked so carefully that they do not burst. The best method to prepare vegetables, so that the lime contained in them shall

benefit the teeth, is to steam them or to boil them in as little water as possible, and also to employ this water, mixed with fat and other things, as a sauce.

Now if, based upon the preceding remarks, we wish to enumerate the prophylactic measures which we have to follow in order to prevent the spread of dental decay, they must be distributed between the community, the family, the single individual, and the dentist in the following manner:—

I. It is the duty of the community:

1. To watch over the instruction given, in regard to hygiene (in our case the care of the teeth), to the people, and especially to the school children;
2. To pay attention to the maintenance of health itself (in our case the care of the mouth)—
 - (a) In schools, especially national schools (school dentists);
 - (b) In the army and in the navy;
 - (c) In industrial concerns, such as bakeries, confectioneries, and factories where materials are prepared or employed which are dangerous to the teeth, as, for example, acids, phosphorus, and the like;
 - (d) In hospitals and other institutions where it is necessary for the doctor and dentist to act in unison;
3. To procure suitable drinking water.

II. It is the duty of the family:

1. To obtain hard water for food from springs or wells;
2. To prepare the foods in such a way that the earthy salts—of lime and magnesium—are not dissolved and removed;
3. To teach the children to eat hard bread, so that the work appointed by nature may be carried out in reference to the teeth.

III. It is the duty of the individual:

1. To brush his teeth regularly every day;
2. To have them annually examined by a dentist;
3. To masticate the food carefully, every mouthful at least from 80 to 100 times.

IV. It is the duty of the dentist:

1. To act by example by paying attention to his own teeth and to those of his family and servants;
2. During the treatment of his patients to look more to the future of the teeth than to the momentary need;
3. To act in unison with the family doctor, especially in regard to diseases of the nose and the pharynx which may cause disturbances of articulation in the maxillæ and in the face;

4. Finally, it falls to the charge of the dentist to endeavor to obtain a high degree of education, so that his scientific vision is enlarged, his fame is raised, confidence is placed in him, and his patients will follow his counsel and prescriptions, especially in regard to general measures which the community must take in hand in the struggle against dental decay, as such decay, like an epidemic, is spreading more and more both among young and old, and threatens to destroy the health and the well-being of our populations.

NOTE ON TEETH EXTRACTION.

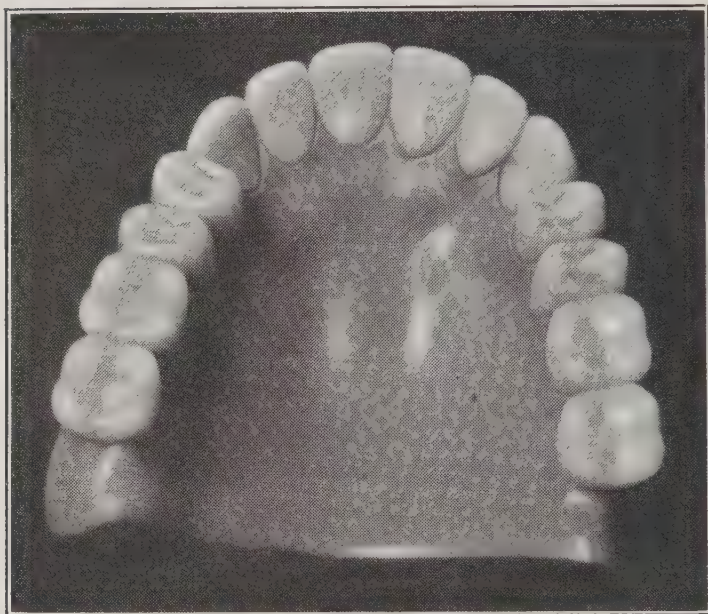
In the case of roots which are badly decayed below the gum margin, or are very fragile, successful and easy extraction can be made by grasping the gum with the blades of the forceps. This will cause the root to shoot up, when it can be luxated and then extracted by easy effort in the usual way.

No attempt should be made to extract the root entirely with the forceps, as it might result in the gum being injured or badly lacerated.

By proceeding as suggested, it is astonishing how little injury is done to the gum.

WALTER WHITEHOUSE.

The Use of Ash's Crowns in Vulcanite Work.



The illustration shown above aptly reproduces the ideal Vulcanite Denture. Notice the nice appearance of the teeth where they come in contact with the tongue. No Vulcanite coming down to the incisal edges of the teeth. You can almost *feel* the clean, pleasant sensation that the teeth give to your tongue. Notice, too, the nice broad surface of the bicuspids and molars, reproducing nature.

In actual use the patient has freer and more articulate speech with this style of denture than with any other. The absence of rubber on the lingual side of the anterior teeth allows the incisors to act as a clear sounding board.

Let us tell you more about these teeth on the next few pages.

NOTE.—Ash Dowel Crowns are the only Crowns that can be successfully used in *Vulcanite work*.

All Porcelain Teeth in Vulcanite Dentures.

Mr. Theodore Phillips of London says: "I may state that for some time past I have been using Ash's Dowel Crowns and their Non-Platinum Tube Teeth with great satisfaction in the construction of vulcanite dentures, and these dentures have been worn by patients with a feeling of personal comfort and pleasure such as is not experienced in the wearing of the ordinary vulcanite dentures.

"The features of excellence which appeal to me in these dentures are these:

"1. The extra room which is gained in the mouth for the free action of the tongue, owing to the vulcanite not being carried so high up the teeth as is usual with pin teeth;

"2. The clean and pleasant feeling which the patient experiences through the contact of the tongue with porcelain all round the arch;

"3. The very natural appearance of the teeth owing to the lingual surfaces not being backed with vulcanite;

"4. The pleasing shapes of the teeth and their delightful translucency;

"5. The open cleansing spaces which they present, no matter how closely or irregularly the bases may be set together;

"6. The bulbous formation of the teeth which gives a restorative fulness to the lips and cheeks, an artistic feature of great value;

"7. The way in which they lend themselves to the irregularity of setting-up, which conceals artificiality;

"8. The strength of the Non-Platinum tube teeth, and their adaptability in the bicuspid and molar regions; they require very little or no grinding for the average vulcanite case, and I consider them the strongest and densest teeth in existence for vulcanite work;

"9. The value of these teeth in repairs; it is so great that any tooth in a denture can be easily replaced should it be broken by any chance."

METHOD OF WORKING.

THE BASE-PLATE.—To prepare the base-plate for this method of working, a tin die is cast in sand from the plaster of Paris model. On this tin die a soft metal base-plate of the thickness of the required vulcanite plate is swaged, in Ash's Rubber Block Swager, and fitted to the plaster model. The bite is then taken in wax on the soft metal base-plate.

This admits of a correct bite being obtained, since the soft metal does not alter in shape like a composition base-plate is apt to do.

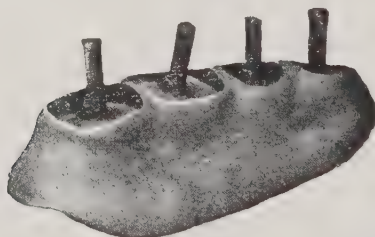
The models are then articulated, the wax blocks are removed from the soft metal base-plate, and the teeth are mounted on it with wax.

FIG. 1.



Case set up in Wax on Soft Metal Base-Plate.

FIG. 2.



Piece of Vulcanite with posts which show the sockets in which the teeth sit in the finished denture.

WAXING-UP.—In waxing-up the teeth on the soft metal base-plate, it is most important to bring the wax up to within a sixteenth of an inch above the bases of the teeth all round, as shown in Fig. 1. This arrangement yields a socket for each tooth, as shown by the spaces in Fig. 2, in which a snug fit is obtained when the case is vulcanized. It is very necessary to fill up the tubes in the non-platinum tube teeth with wax, as shown in Fig. 3, to prevent the plaster running into them when the case is flaked.

FLASKING.—The case is sunk, teeth upwards, in the bottom half of the flask, with all the teeth and wax exposed, as illustrated in Fig. 3.

FIG. 3.



Soft Metal Base-Plate on Model with Dowel Crowns and Non-Platinum Tube Teeth waxed up and embedded in lower half of flask, with the teeth upwards and the tubes filled with wax.

Before pouring the plaster into the top half of the flask, it is essential that the plaster—the plaster only—in the bottom half of the flask be oiled, to prevent any adhesion when the two halves are parted.

The plaster is then poured in the top half of the flask, the two halves are fitted together and closed down in the flask press. When

the plaster has thoroughly set, the flask is slightly warmed through, before the two halves are parted. Particular care is taken not to overheat the flask, as the wax is liable to be absorbed by the plaster if overheating takes place.

FIG. 4.



Teeth embedded in upper half of flask after the wax has been scalded out, basal surfaces upwards.

On the flask being parted, the case should come away in the top half of the flask.

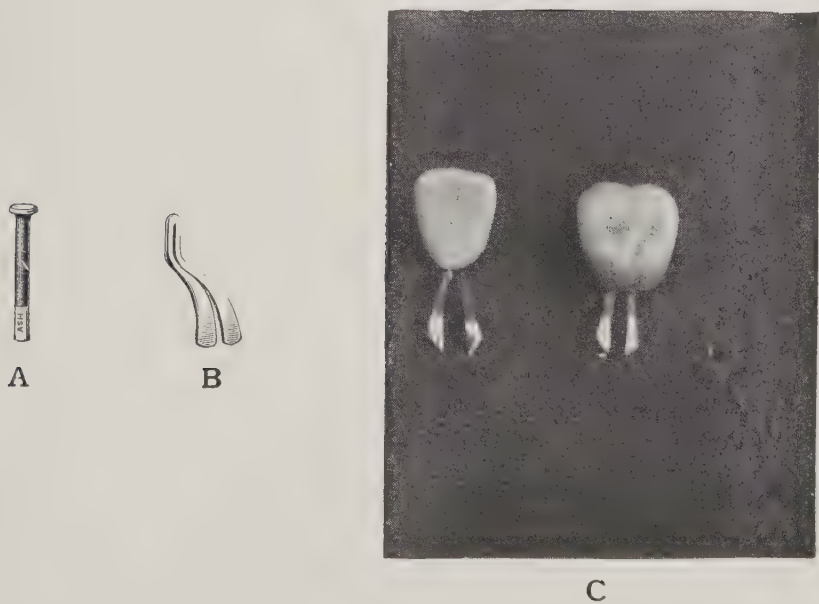
The wax is then boiled out and the soft metal base-plate is removed, as shown in Fig. 4. The posts or tags are then cut to the proper length and fitted to the teeth.

FIG. 5.



Vulcan Tag-Posts in position in Flasks.

FIG. 6.



A—Ash's Aluminum Alloy Post roughened.
B—Vulcan Tag-Post. C—Vulcan Tag-Posts in Crowns.

POSTS.—After numerous experiments and comparative tests with different kinds of posts, we find that the most suitable for dowel crowns and non-platinum tubes which are sunk in the rubber as shown in Fig. 2, is Ash's Aluminum Alloy—A, Fig. 6—which is specially roughened to give the rubber a good hold.

For use in partial cases, with isolated crowns or tubes, and with crowns or tubes which are let down on to the gum, the Vulcan Tag-Post—B, Fig. 6—is the best; it is very thin, stiff and unbreakable.

Before the posts are fitted the half of the flask which contains the teeth is heated, small pieces of the rubber for base are packed into the holes of the crowns or tubes, and the posts are pressed into this rubber. This ensures the posts being covered with rubber.

The holes in the crowns and tubes being roughened as well as the posts, absolute contact is secured, and no cementing-on is necessary.

The palate and buccal surfaces are then packed with small pieces of rubber and the flask is closed in readiness for vulcanizing.

VULCANIZING.—The case is vulcanized, according to the directions generally given for vulcanizing, namely, at 315 degrees Fahrenheit for 75 minutes, after the temperature has been very gradually raised to this point. In accordance with the most recent recommendations the thermometer and gauge are used together.

Posts for Vulcanite Work

ASH'S ALUMINUM ALLOY POST (A). See page 19.

The great advantage of this post is that it does not oxidise during the vulcanizing process and it does not discolour in the mouth.

It is made from stiff aluminium alloy wire of just the right thickness for the rubber to run all round it.

It is an advantage to pack a tiny piece of white rubber down the hole of each Non-Platinum Tube Tooth, before packing the case, as it looks better on the crown than brown or red rubber.

THE VULCAN TAG-POST (B). See page 19.

For Dowel Crowns which are let down on to the gum the Vulcan Tag-Post is indispensable; it is very thin, stiff and unbreakable.

For use in partial cases the Vulcan Tag-Post is the most suitable.

Isolated Crowns or Tubes can be used upon a denture with every success when the Vulcan Tag-Post is employed.

Ash's Dowel Crowns

The following six pages of illustrated matter descriptive of our Crowns are worthy of close attention, and in addition a number of new and valuable moulds are submitted since our last advertising.

Owing to the post holes in these Crowns being ground out after they come from the furnace, the hold is stronger, both for cement and vulcanite, than any other. The moulds, if you will but compare them with others, are the most natural, and in separate crown work the bases will be found to fit the greatest number of roots.

The faces of these crowns, as in all Ash's teeth, show individuality and naturalness, which are lost in porcelain teeth, as the fine carving and contouring are lost in all high fusing bodies.

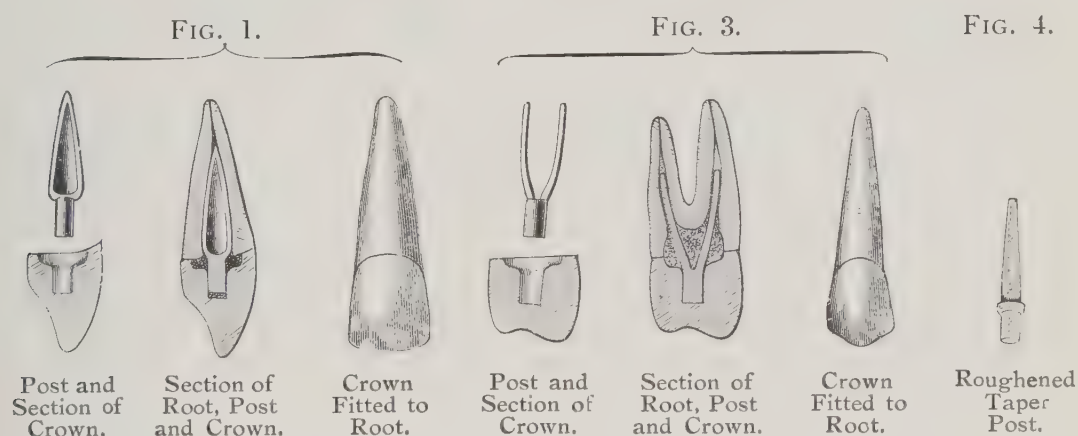
Single Crowns	\$.12
200 Crowns in Wood Case.....	20.00
Dental Alloy Pins, Single	.35
Dental Alloy Pins, Bifurcated	.45
Base Metal Pins.....	.05

Ash's Dowel Crowns

The principal advantages of a detachable crown, as contrasted with a crown having a pin fixed in the mineral, lie in the facilities afforded for grinding the base of the crown to fit the root and for bending the dowel to the angle required to obtain a correct bite.

In Ash's Dowel Crowns the measurements and shapes of the bases are such as to fit the greatest number of average roots.

Posts for Crown Work



The Fluted Post (Figs. 1 and 2) and the Bifurcated Post (Fig. 3) are made of Dental Alloy, which is more rigid than Platinum. The strongest part in them is the part which has to bear the greatest strain, viz., where the crown joins the root.

Fig. 1 is made in two sizes, large and small. The large size is suitable for upper roots in general, and the small size for the roots of narrow upper laterals and the roots of lower teeth.

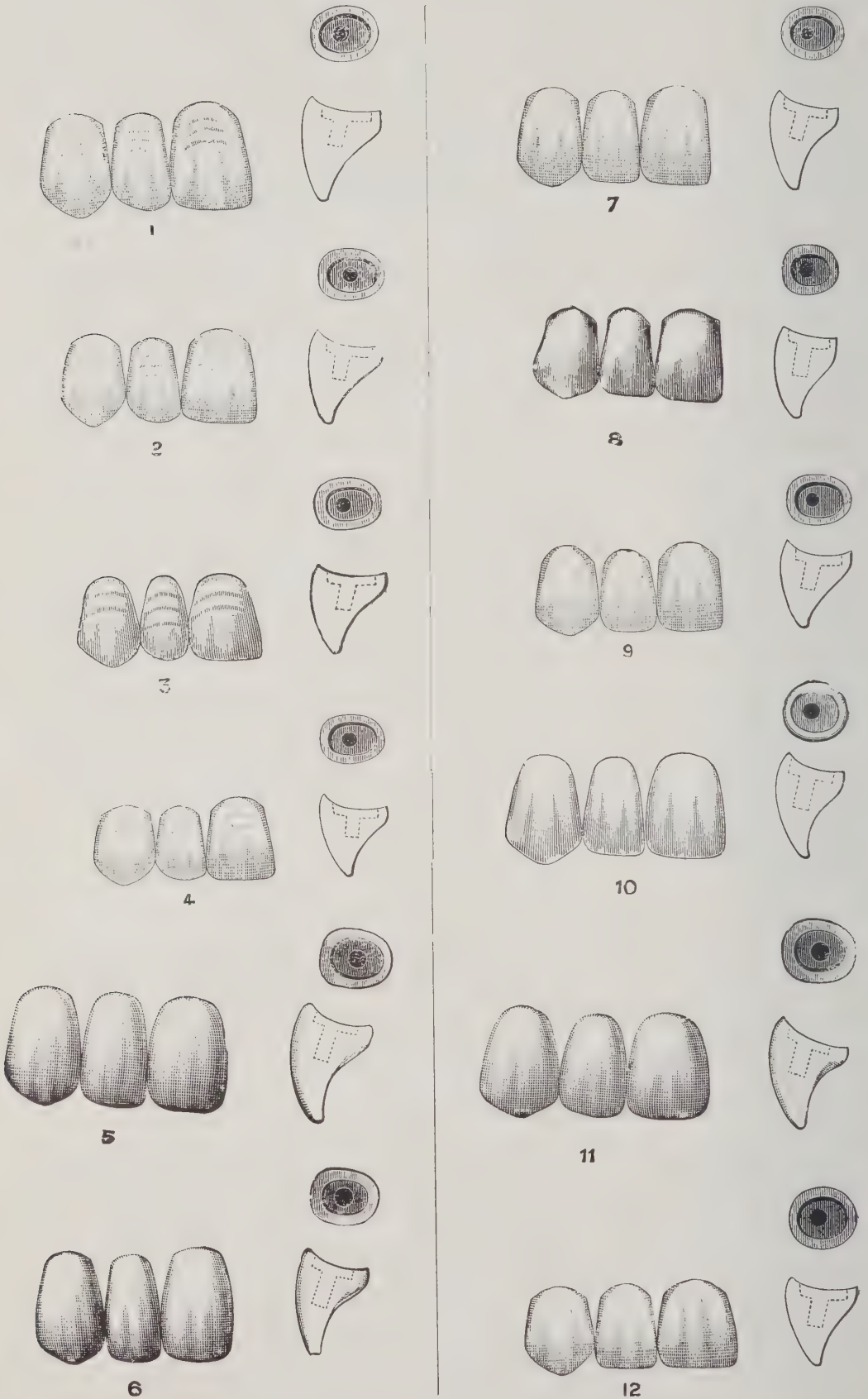
Fig. 2. Not illustrated. Similar to Fig. 1, but smaller.

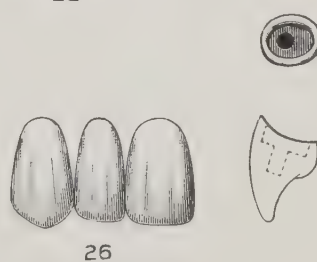
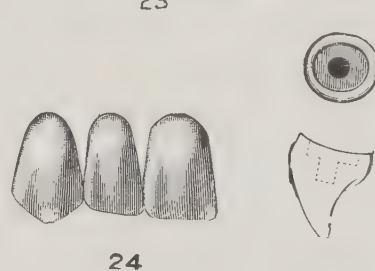
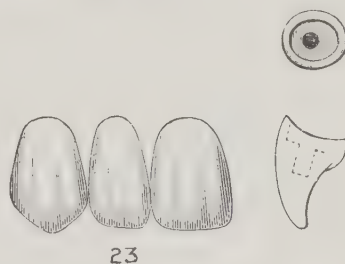
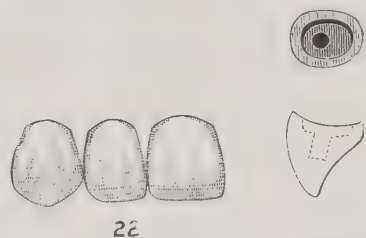
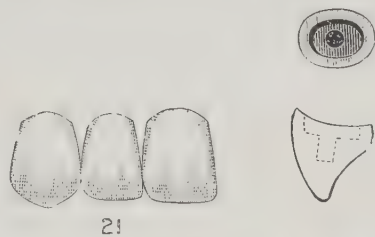
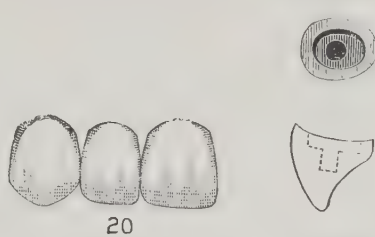
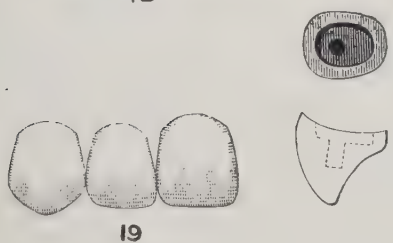
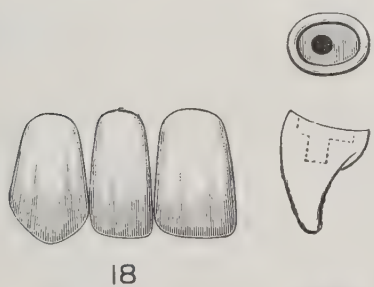
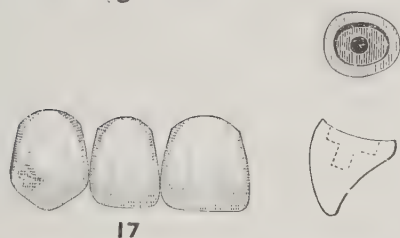
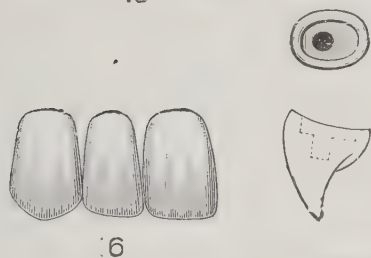
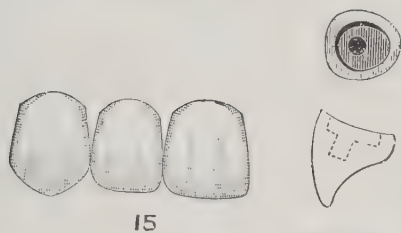
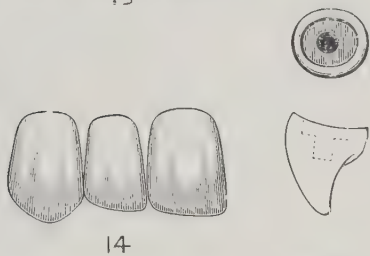
Fig. 3, for the bifurcated roots of bicuspid, is extremely strong, and yet the prongs are sufficiently pliable and thin to admit of their adaptation to the bends of root-canals.

Fig. 4 is a tapered post of great strength, made from a stiff white metal. It is roughened all over in such a way as to afford a very firm and secure hold to the cement which is used for joining the Crown to the Post and setting the Post in the Root.

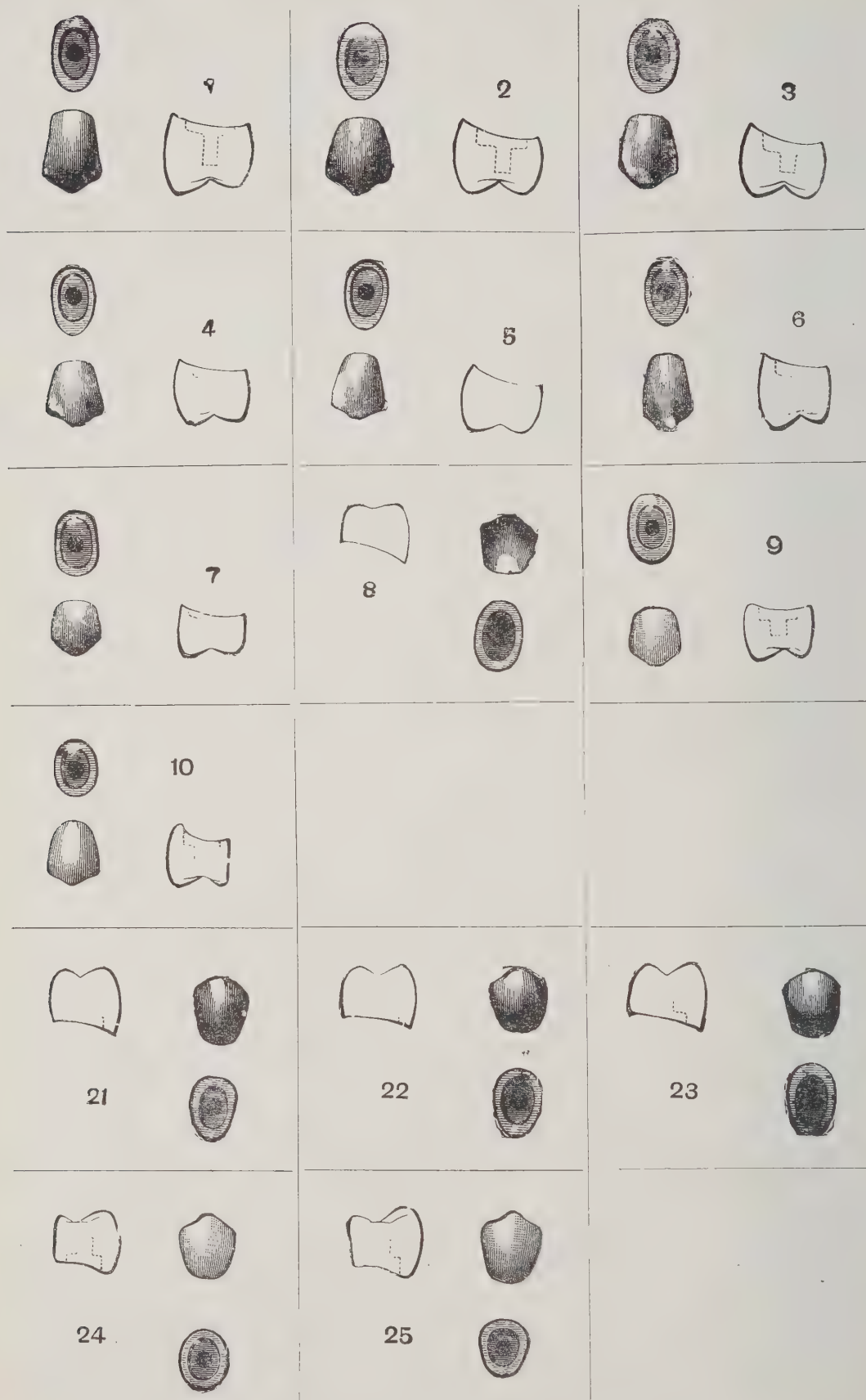
Fig. 5. Not illustrated. Similar to Fig. 4, but smaller.

ASH'S DOWEL CROWNS—UPPERS



ASH'S DOWEL CROWNS—UPPERS—*Continued*

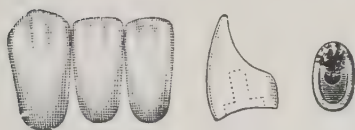
ASH'S DOWEL CROWNS—BICUPSIDS



ASH'S DOWEL CROWNS—LOWERS



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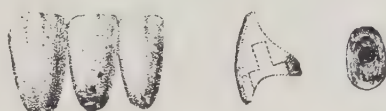
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MOLARS



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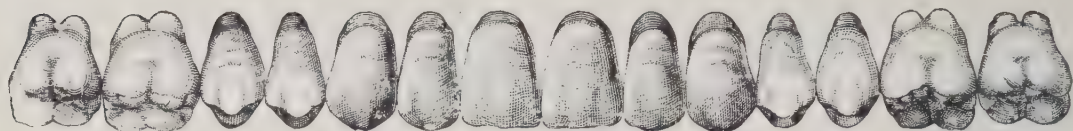


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ASH'S DIATORIC TEETH.



Our Diatoric Teeth are made of the same mineral as our Pin Teeth, and possess the same qualities of strength and freedom from porosity. They are made in a great variety of shapes, sizes and shades, and are well adapted for vulcanite work.

They have now been before the Profession for more than thirty years, and the increasing demand for them in all parts of the world is good evidence of their high quality.



The above illustrations of a Diatoric Incisor, viewed (*a*) from the side, (*b*) from the back; (*c*) from the base, and of a molar, viewed (*d*) from the side, (*e*) from the base, show the features which go to make our pattern the most appreciated of all diatorics.

The Incisors are firmly held in the rubber by a dovetail wedge, which, to give additional security, is traversed by a hole into which the rubber flows.

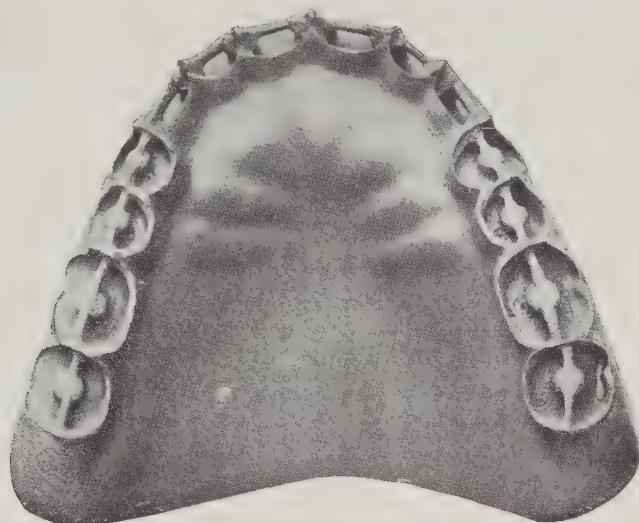
The Bicuspid and Molars are hollowed out from the base towards the crown to form a chamber out of which two holes run laterally through the approximal walls. During the vulcanizing process the rubber flows into the chamber and through the holes, thus holding the tooth most securely. Additional anchorage is obtained by the vulcanite in the groove on the lingual surface.

They are vastly superior to any Composition Pin Teeth in the market for Strength, Texture, Reliability and Fitness for wear in the mouth.

ASH'S DIATORIC TEETH—*Continued.*

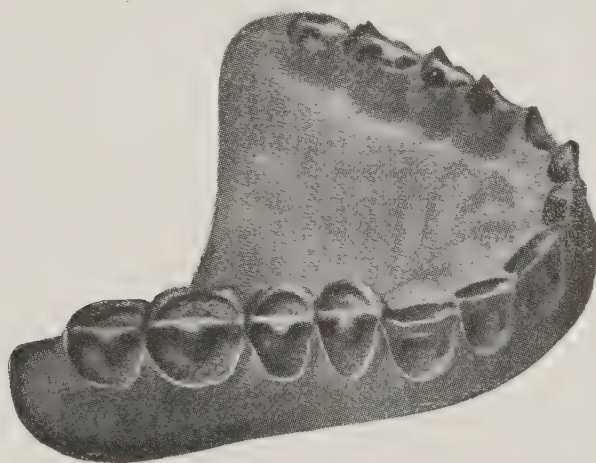
They are perfectly suited for every form of vulcanite denture and cast metal denture.

Our Diatoric Front Teeth, with thin cutting edges, are greatly esteemed for use in all diatoric vulcanite dentures.



Lingual view of upper vulcanite denture from which the diatoric teeth have been dissolved, to show the excellent anchorage obtained by the vulcanite.

It will be seen from the illustration that in the process of vulcanizing both the basal holes and the side holes are completely filled with the rubber.



Side view of same denture.

In ordering our Diatoric Teeth be careful not to allow any other to be substituted for them.

PER TOOTH - .04

QUANTITY RATES ON APPLICATION.

PRACTISES FOR SALE

- FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350
- FOR SALE—Dental Practice in Western Ontario Town. Good equipment and good practice. No opposition. Practice yields \$2,000 per annum. Apply Ash & Sons 500
- FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -
- FOR SALE—Dental Practice in Eastern Ontario Town. Good Outfit. Practice yields \$2,000 per annum. Low expense. One visiting Dentist only in same location. Population of Town, 2,500. Apply Ash & Sons - 250
- FOR SALE—Dental Practice. Exceptional opportunity to acquire a good opening. Must be sold quickly if at all. Apply Dental Practice, c/o C. Ash & Sons - -
- FOR SALE—Dental Practice, Fergus, Ont. Has been a Dental Office for 39 years. Ill health reason for selling. For particulars apply to Dr. G. A. Reid, Fergus, Ont.
- WANTED—Dental Assistant, to take charge of Ontario practice, and if satisfactory to both parties, to acquire partnership Apply Box 369. C. Ash & Sons.

SECOND-HAND GOODS

- | | | |
|--|-------------|---------|
| 1 S.S.W. Pattern Chair, Leg Base | - - - - - | \$30 |
| 1 Case Harvard Chair | - - - - - | 2 |
| 1 S.S.W. Wilkerson Chair | - - - - - | 50 |
| 1 Case Harvard Chair | - - - - - | 30 |
| Contents Toronto City Dental Office. Apply Ash & Sons. | | |
| 1 Special Golden Oak Cabinet with Mirror and Medicine Top, practically new | - - - - - | 60 |
| 1 Davis Gasometer, less Face Piece and Tubing, excellent condition | - - - - - | 18 |
| 2 Elgin Casting Machines with Attachments for plates, each | | 25 |
| 1 Wetherby Suction Machine (new style), in A-1 condition | | 25 |
| 1 Pelton Porcelain Furnace, A-1 condition | - - - - - | 25 |
| 1 Davis Gasometer | } - - - - - | 25 |
| 1 Mills Centrifugal Casting Outfit | | |
| 1 Olympian Swager | | |
| 2 Triumph Electric Lathes | - - - - - | each 12 |
| 1 Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler | - - - - - | 12 |
| 1 Clark Colden Oak Cabinet in good condition | - - - - - | 25 |

WE beg to advise that we will shortly pass into our stock a large assortment of **FINE DRILLS** made by

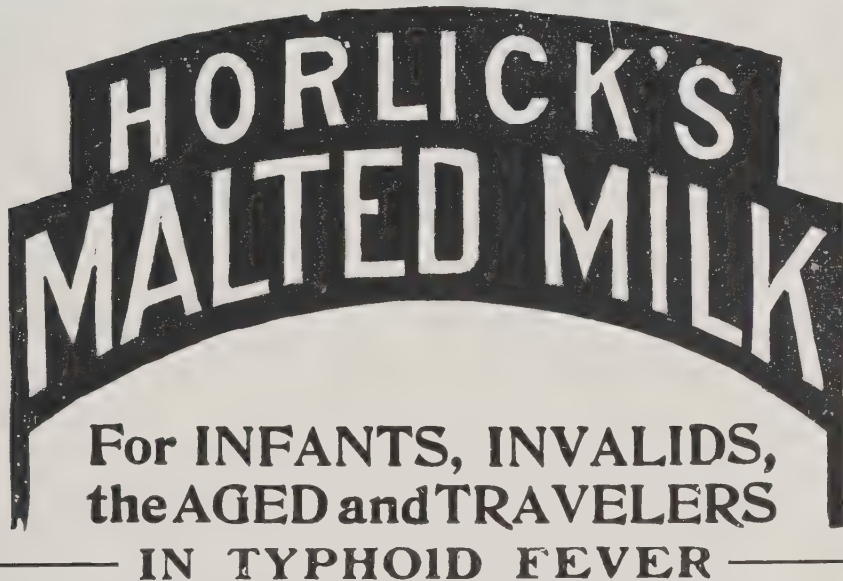
Messrs. J. Beutelrock & Son of Munich

These Drills for which we are the Sole Agents for Canada will retail as follows:

Single Drills for either Hand Piece	-	.35
In Lots of One Dozen	- - - -	\$3.60

Either direct or through your dealer.

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Pure, rich milk combined with an extract of malted grain, highly concentrated, partially pre-digested, palatable, and readily assimilated, makes **HORLICK'S Malted Milk** the physician's first choice when selecting a reliable nutriment in the treatment of Typhoid and other low fevers.

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The Ideal Filling Every Time

A GAIN the "impossible" has been made possible, the "unattainable" attained. Recently one of the greatest Dentists of America, formerly the dean of a great dental college said: "I have lived to wit-

ness many wonderful things in my profession, but I did not expect to live to see a material as wonderful as DE TREY'S SYNTHETIC PORCELAIN."

A leading dentist of Zurich told the writer of this advertisement recently that few months ago he had examined several hundred synthetic fillings inserted four years ago and found them perfect both in appearance and endur-



ance. In the last three years he had inserted several hundred synthetic fillings and had 100% perfect appearance.

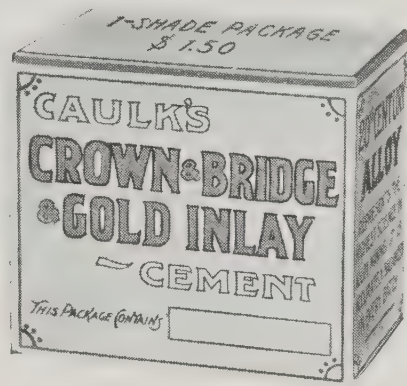
IT IS EASY TO MANIPULATE. Our Aseptic Shade Guide (\$1.50) is so ideal that it is practically necessary, for instead of approximating shades, it enables you to match them absolutely. **THIS SET OF INSTRUMENTS** in a case, where they should be kept regularly (\$6.50) will meet every requirement.

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The Highest Type of Oxy-Phosphates

TESTED in the laboratory or tested in the mouth these cements show strength unequalled, and a degree of insolubility that approaches the absolute. They are submarine in nature, and after setting are impenetrable. So absolutely are these statements proved that we are willing to submit to any competitive test that is fair and that has meaning.



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CROWN & BRIDGE & GOLD INLAY CEMENT is especially adapted for setting Facings, Crowns, Bridges, Caps and Inlays. It is made in six shades.

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WHOLE OUTFIT \$6.00

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FOR THE DENTAL PROFESSION

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Accidents

Just "any old kind" of an operating stool won't do. A case is cited where a dentist jabbed an instrument through his patient's cheek because the stool he was using slipped at a critical moment.

The construction of the

Automatic Operating Stool

Patented Nov. 19, 1912

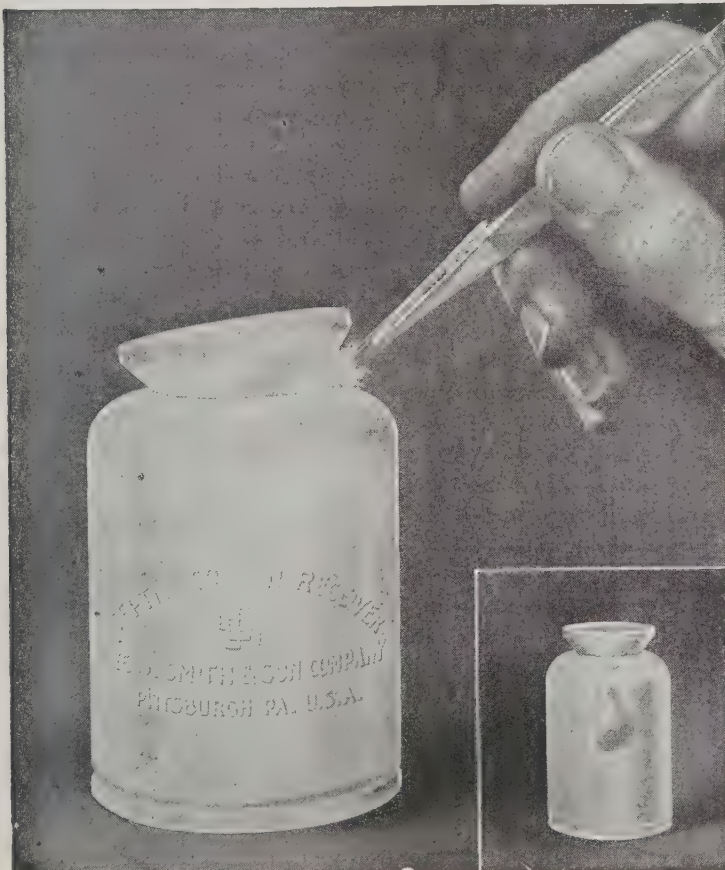
makes such accidents impossible. The central shaft is constructed similar to a ratchet and pawl, and is actuated by a spring lever at the side. The weight of the body on the seat forces the bottom of pedestal straight down—no matter what position the spring coil at bottom may be in, and **slipping is impossible.**

Buy the Automatic Operating Stool and avoid costly accidents.

Price \$18.75

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Pittsburgh, Pa.



It's So Easy

to drop waste cotton from your pliers into the Aseptic Cotton Receiver that to throw such things on the floor is almost criminal.

Imagine your patient's thoughts when he emerges from your chair to find a small snowstorm of cotton all over the floor!

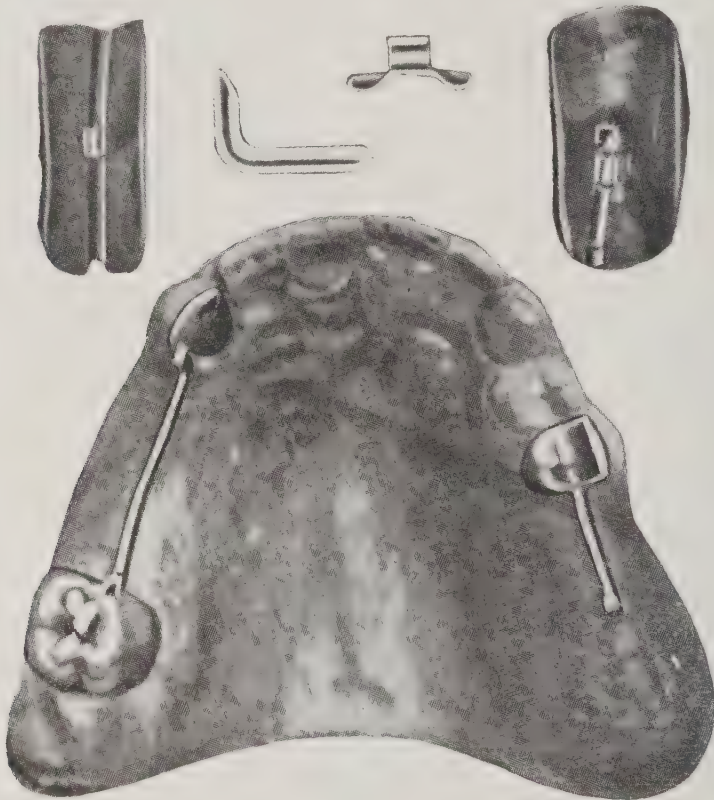
To change those thoughts is worth a great deal more to you than the **\$1.30** the Aseptic Cotton Receiver will set you back. Buy it NOW.

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Removable Bridgework

WHILE fixed bridgework will always find a place in the practice of dentistry, conditions arise wherein fixed work is not indicated. Under such circumstances, the operator owes it to his patients to prescribe a denture that will accord them service, and be removable, the latter feature being desirable from the standpoint of prolonging the life of the piers to which the substitute is attached, together with the recognized fact that a hygienic condition of the oral cavity cannot be maintained in mouths carrying large pieces of non-removable work.



Represents the preparation of the mouth to insert first molar and the bibuspids. In this case, the molar being loose the angle bar is converted into a splint by making it continuous to cuspid. To provide against lateral movement or rocking of the piece the angle bar is made prominent in its vertical arm, the groove in the rubber engages the bar as shown in illustration.

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Pyorrhocide Prevents Pyorrhea

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Dentinol (2 oz. bottle) - - - -	\$ 1.00
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Pyorrhocide (4 oz. can) - - - -	1.00
Pyorrhocide (in doz. lots to Dentists only)	10.50
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Improved D. P. Scalers (set of 12) -	9.00
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This means that the slightest detail has been worked out on a scientific basis in accordance with the ideas of the best authorities.

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Plain Rubber—Anteriors and Posteriors platinum pins.

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If your dealer cannot supply them order direct.

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The Two Greatest Blessings To Operator and Patient

Hygienic
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Painless
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Hygiene for the
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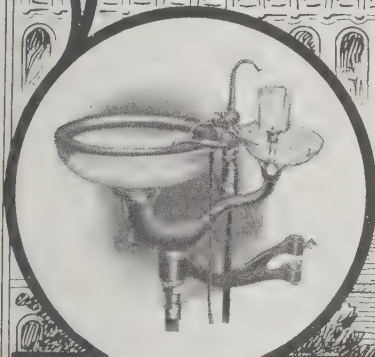
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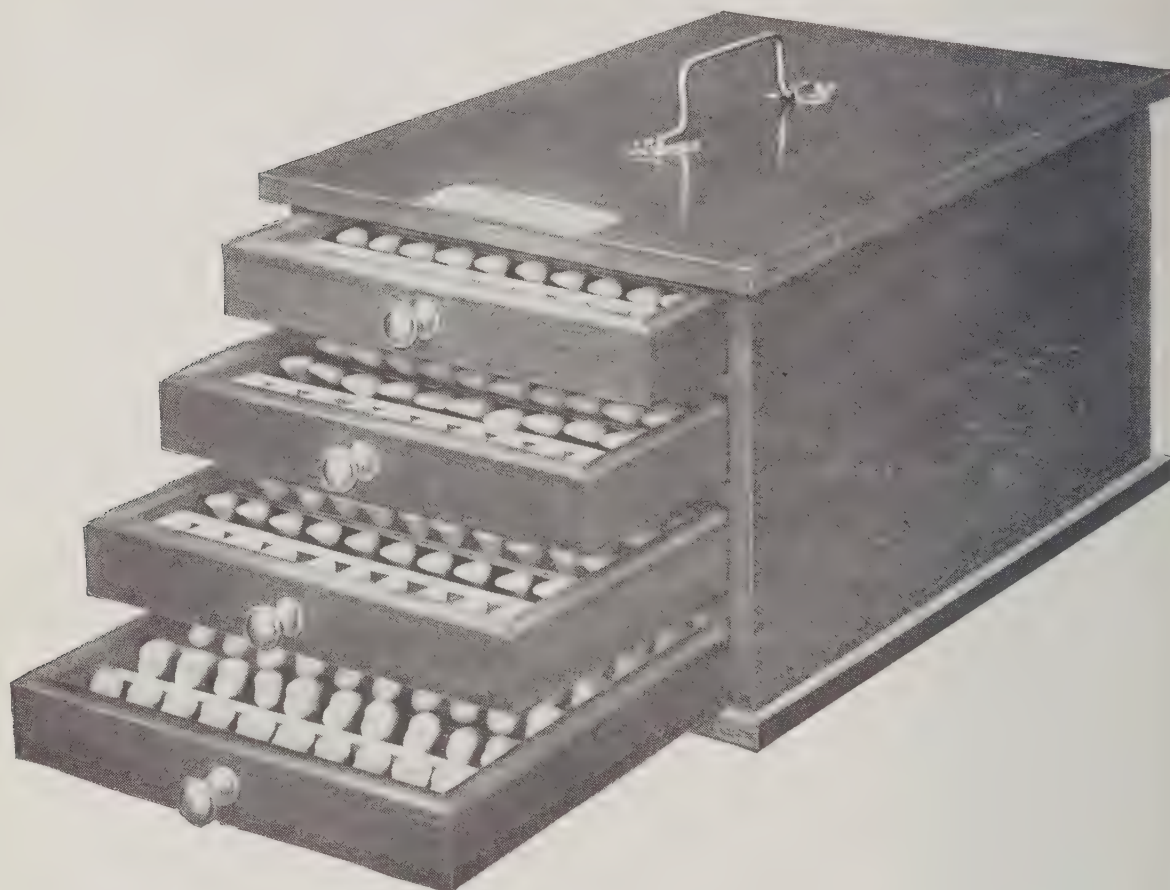
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Standard Assortment OF Davis Crowns No. 2

Consisting of 370 crowns and an assortment of straight and split pins.



☐ A private stock in a mahogany cabinet.

☐ Each crown has its own numbered space in this cabinet.

☐ There is no better way to keep your stock in good order and down to the minimum than in this cabinet.

☐ It is a time saver because you do not need to make casts and wait for the dental depot to fill your order.

☐ It is a money saver because it prevents an overstock of undesirable molds and shades and also the unnecessary purchase of crowns when you have what you want somewhere on your shelves but cannot find it.

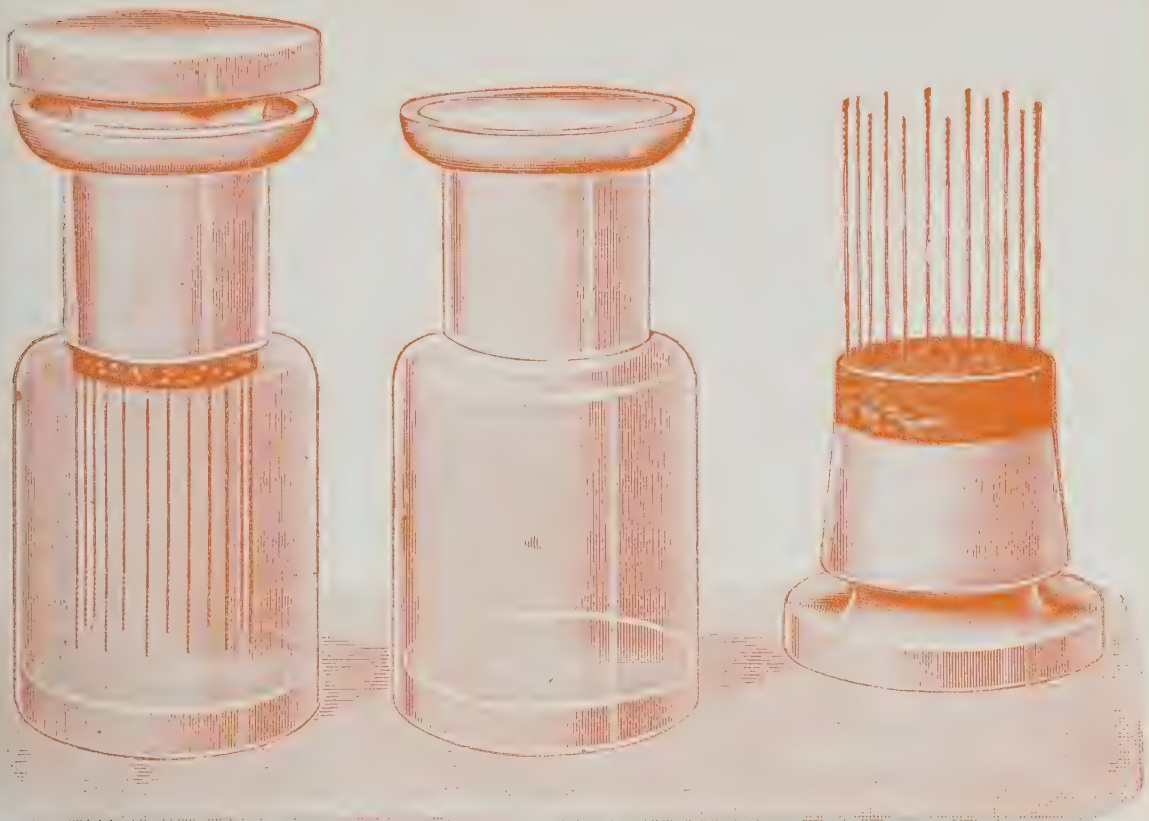
☐ Price, including 100 straight and 17 split pins in mahogany cabinet, \$100.00.

CONSOLIDATED  DENTAL MFG. CO.

**New York
Boston**

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Philadelphia**



BROACH BOTTLES

These illustrations show the advantages of the bottles and the method of using them. They are labelled (Burned) respectively "Sterilizing Fluid" and "Alcohol." By the use of these bottles the points of the Broaches are protected from injury and are kept in a sterile condition. The antiseptic fluid on each instrument is neutralized by immersing it, immediately before use, in the second bottle which should contain Alcohol. A solution of Lysol is recommended :: :: :: for the sterilizing bottle. :: :: ::

Set of Bottles in Cardboard Case, 80c.

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HAMBURG, Cansemarkt, 62 and 63
FRANKFURT, a m Borsenplatz, 7
MILAN, 11 Via Monte Napoleon
AMSTERDAM, 149 Weteringschans
VIENNA, Spiegelgasse, 2
BUDAPEST, Ferenczikttere, 4
CONSTANTINOPLE, Rue Zumbul, 25

MUNICH, Theatinerstrasse, 15
CHARKOW, Petrowsky, Per 17
COPENHAGEN, Boldhusgade, 3
CHRISTIANIA, Tordenkjoldsgade, 9
STOCKHOLM, Malmskilnadsgatan, 44
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BRESLAU, Curtenstrasse, 22
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ASH'S CANADIAN MONTHLY CIRCULAR

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CANADIAN BRANCH,

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The S. S. White Dental Mfg. Co. lines.

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And many other lines of merit.

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A Novel Motor Ice Boat on Toronto Bay

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ADVANCE

“**T**HE voice of Time ” said the Phantom, “cries to man, Advance ! Time is for his advancement and improvement, for his greater happiness, his better life, his progress onward to the goal within its knowledge and its view, and set there, in the period when Time and He began. Ages of darkness, wickedness, and violence have come and gone—millions uncountable have suffered, lived, and died—to point the way before him. Who seeks to turn him back, or stay him on his course, arrests a mighty engine which will strike the meddler dead ; and be the fiercer and the wilder, ever, for its mometary check ! ”

The Chimes

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, MARCH 1, 1913

No. 6

THE ABNORMALITIES OF THE THIRD MANDIBULAR MOLARS.

By A. Landon Whitehouse, M.R.C.S., L.R.C.P., L.D.S., Eng., Assistant Dental Surgeon at the Royal Dental Hospital of London, etc.

The extended application of the X-rays to dental surgery has casually revealed the many abnormalities of position of these teeth on plates and films taken for the elucidation of the many surgical and pathological problems with which hospital practice is beset.

It may be convenient to divide these abnormalities into the five following groups:—

1. Abnormalities of deviation, in which the third molar has been found in various parts of the ascending ramus and sigmoid notch.

2. Abnormalities of position, in which the crown of the tooth tilts forwards, backwards, inwards, rarely outwards, to total inversion.

3. Abnormalities of 1 and 2 combined.

4. Abnormalities of 2 resulting in impaction against the posterior aspect of the second molar in various degrees, culminating in absorption of the roots and exposure of the pulp of that tooth.

5. Abnormalities from lack of eruptive force.

This last condition is as interesting as it is common. Pain and great discomfort cause the patient to seek advice, so that a few brief notes on the treatment of this condition may be of some little assistance.

It would appear to be the result of a simple failure of eruptive force, whereby the tooth, normal in other respects, unimpeded by impaction or restrained by the exigencies of lack of space, remains in status quo with the anterior portion of the crown erupted and the remainder covered with gum, which, being unattached at its anterior margin, forms a pocket over a portion

or the whole of the posterior part of the crown of the tooth. The functionless condition of the tooth leaves it exposed to the effects of food stagnation in the pocket, resulting after infection in a chronic local gingivitis with extension to the alveolar dental ligament, and, as may be noted in extracted teeth, in exostosis of the roots (productive periostitis).

This slow chronic condition is aggravated by numerous acute exacerbations, during one of which a clinical picture is thus presented:—

Pain and discomfort in the region of the third mandibular molar; slight impairment of the movement of the jaw. The glands beneath the jaw may be slightly enlarged and tender. Gingivitis around the tooth and gum flap, with extension down to the soft palate to the anterior pillar of the fauces, causes slight sort throat. The eruptive portion of the third molar is tender on pressure. The anterior free margin of the gum flap is tense and painful. The maxillary third molar, if present, may impinge upon the swollen gum. There may be a history of past attacks which have resolved untreated.

This condition, simple as it may appear, obviously requires treatment, for it is unwise to assume that the inflammation will remain local and circumscribed. A spreading cellulitis into the neck, terminating in Ludwig's angina, complicated by trismus, has from this simple inflammatory condition led to very serious symptoms. As to treatment, the operator must be guided by the general condition of the patient. Cases of obstinate trismus, with signs of deep-seated inflammation, still spreading suppuration around the teeth, with signs of septic absorption in the patient, should be dealt with by prompt extraction. On the other hand, in the simple cases with pain and discomfort only, of a purely local condition, treatment should be directed towards the removal of the gum flap and eradication of the pocket. The pocket should be freely washed out with a mild solution of warm peroxide of hydrogen from a fine nozzle syringe, and the free margin of the flaps should be touched with a bead of nitrate of silver fused upon a suitable platinum needle. If this treatment be carried out daily, the pocket will be gradually destroyed and the gum over the tooth will be slowly removed by the caustic. The tooth will erupt, provided that this issue be not impeded by the presence of an elongated maxillary third molar. A mild caustic will be found more suitable than lancing the gum. This tissue at the time is chronically inflamed and exceedingly tender; moreover, the incision tends to heal before the object has been achieved.

The complete removal of the gum with a scalpel is difficult on account of the position of the parts and the slight trismus which is usually present.

THE IONIC TREATMENT OF PYORRHEA.

By R. Fairfax Reading, M.R.C.S., L.R.C.P., D.D.S.

Pyorrhoea, treated by this method, can be cured in from three to four weeks.

The use of an autogenous vaccine, with its attendant expense and other drawbacks, is avoided.

Ionisation is fatal to all germs; the method does not differentiate between streptococci and staphylococci.

Complete and efficient scaling is imperative to remove irritation.

All teeth must be extracted where the absorption of the alveolar process has advanced to such a point that they cannot regain a fair degree of immobility.

The only special appliance required is a rheostat, which will reduce the current used to fractions of a milliamperé.

Any continuous current may be used, viz., the ordinary street current of 240 volts, or one obtained from a number of cells in series, or from an accumulator.

The amount of current required varies from one-half to one and a half milliamperes.

Each sitting or treatment should be of from thirty to forty minutes, at intervals of two days.

The electrodes used are of platinum; these undergo no change during use, and can be easily cleaned and sterilized in the lamp flame.

The drugs used are a 5 per cent. solution of argynol as a sedative after scaling, and a 5 per cent. solution of chloride of zinc to destroy the bacteria in the gum tissues which are the cause of the pyorrhoea. Both these drugs are applied by means of the positive electrode; if iodine is used in place of zinc, the negative electrode is used.

A wisp of cotton-wool wrapped round the platinum electrode is sufficient to convey the solution to the point required.

The point is applied to the gum margin at one end of the dental arch, and the margins are followed round to the other end and then back to the starting point by way of the other side of the arch, the solution being renewed from time to time on the way.

Special attention should be paid to the interdental spaces, where the infection always appears to be deepest and most resistant.

During two years, pyorrhoea treated by this method has furnished over 90 per cent. of cures.

PRACTICAL POINTS.

Taking the Bite for Bridge-work.—For bridge-work the taking of an accurate bite is essential; this the author obtains by cutting a strip of thin but stiff paper to the form of half a horse-shoe, about $1\frac{1}{2}$ cm. in width, and sufficiently long to cover the crown surfaces from the last molar to the central incisor. Impression compound is then heated, and shaped into a ribbon of about 2 mm. thickness, which, when hot, is laid upon the paper strip. The other side of this strip is covered in the same way, forming a sort of sandwich. After carefully heating and softening both sides, this perfectly flat ribbon is laid on the masticating surfaces of the teeth, of which the articulation is to be ascertained, the patient is requested to bite, and keep the teeth closed. A few syringefuls of cold water are directed against the anterior border of the impression material, the water to be drawn out by the saliva ejector inserted on the other side of the mouth. When hardened, the compound impression is removed and transferred to the working model. The paper core gives the impression great rigidity, and, if thin ribbons of the compound have been used, a perfect articulation is obtained.—H. Leger-Dorez. *Le Laboratoire et le Progres Dentaire*, Paris, March 3, 1912.

Producing Smooth Surfaces in Vulcanite Plates.—Vulcanite plates come from the vulcanizer with smooth surfaces if the model and all plaster surfaces coming in contact with the rubber are painted with a mixture of one part of water-glass and two parts of alcohol.—*Archiv fur Zahnheilkunde*.

Dental Cysts.—A dental cyst which has suppurated is almost the only condition which simulates a chronic alveolar abscess, and this can be distinguished by its history and clinical signs. A dental cyst forms a smooth hemispherical swelling, more often situated on the outer than on the inner side of the alveolus, and rarely on both sides; its walls are resilient, or fluctuate where a bony covering is absent. The bone at its base is frequently arranged in a crater-like form, sending trabeculae over its surface, and between these ribs of bone or trabeculae the bony covering is thin and parchment-like or absent in places. The mucous membrane is thinned, but of a natural color, and freely movable over the cyst wall. There is an absence of all inflammatory signs, and a history often of some years' duration. In many cases the swelling has grown so gradually and painlessly that the patient has been unaware of its existence.

The presence of a dead tooth or the absence of a live one in association with the cyst is an important point in its differentiation, although the treatment of these two varieties of cyst, dental and dentigerous, is very similar.—F. Coleman, *St. Bartholomew's Hosp. Journ.*, per Dental Surgeon.

Disposing of Vulcanizer Steam.—It is often urged that the vulcanizer should be allowed to cool down gradually, and the advice is good, but it is difficult to follow in the great majority of cases owing to want of time; life is too short to admit of its faithful application.

An easy method of disposing of the steam is to affix one end of a small length of flexible tubing to the blow-off tap and to put the other in a pail of water.

The result is no smell, no noise, no steam or moisture blown into the workshop, the vulcanizer is cooled down in a few minutes, and plaster of Paris and other stock are saved from the ill-effects of dampness.—A. Ernest.

Reimplantation of Teeth.—In all tooth implantations it is absolutely necessary that the implanted tooth be in perfect articulation. The reason for this may be that only perfectly articulating roots which are normally engaged in the masticating process maintain the stimulation necessary for a sufficient blood supply, while teeth which do not articulate fall out. The alveolus must firmly grasp the tooth, which is pressed into it with some force. The tooth to be replanted is laid in a weak borax solution for about thirty minutes, and the alveolus rinsed with the same solution until haemorrhage subsides. After the tooth is replaced properly in its alveolus and firmly ligated, an impression is taken, and a rubber piece with two clamps is made to perfectly retain the tooth. Silk ligatures are not indicated for this purpose. The articulation is temporarily raised by a cast aluminum splint, until the replanted tooth has become firm.—Ascari, *Revista Stomatologica*.

Worm Teeth.—In China, when a patient presents himself with the toothache, the operator makes an incision into the gums to let out the worms. He has with him a hollow bamboo filled with artificial worms. He applies the stick to the tooth, drops the worms into the sufferer's mouth, and then picking them out, conclusively proves to the credulous Celestial that he has removed the cause of pain. Miller, in his "Micro-Organisms of the Human Mouth," refers to this practice, and says that a hollow tooth is called by the Chinese "chung choo," which means a worm tooth.—J. Howard Mummery.

To Repair Amalgam Fillings.—When it is desired to add to an old amalgam filling, clean the surface with a crosscut bur, wipe the clean part of the amalgam with cotton-wool moistened with concentrated phosphoric acid, and pack on the new amalgam, which will adhere with no trouble: the joint has about 80 per cent. of the strength of the amalgam used.—Stanley Read, I.D.S., Eng.

Bar Lowers and Combination Plates.—How to solder a metal attachment for adding a tooth to a bar lower or combination metal

and vulcanite plate without injuring the vulcanite:—Insert the vulcanite ends in plaster of Paris in a copper boiling-out pan to support the plate and to keep it upright, so that the part to be soldered is just above the rim level. Having attached the clip to the denture with hard wax place a Melotte's soldering appliance at the side with the upright arm and self-locking tweezers, in such a position that the clip is securely held in place. Fill up the pan with water to cover the teeth and then solder—with the nitrous oxide blowpipe for preference.—A. G. Attenborough, L.D.S.

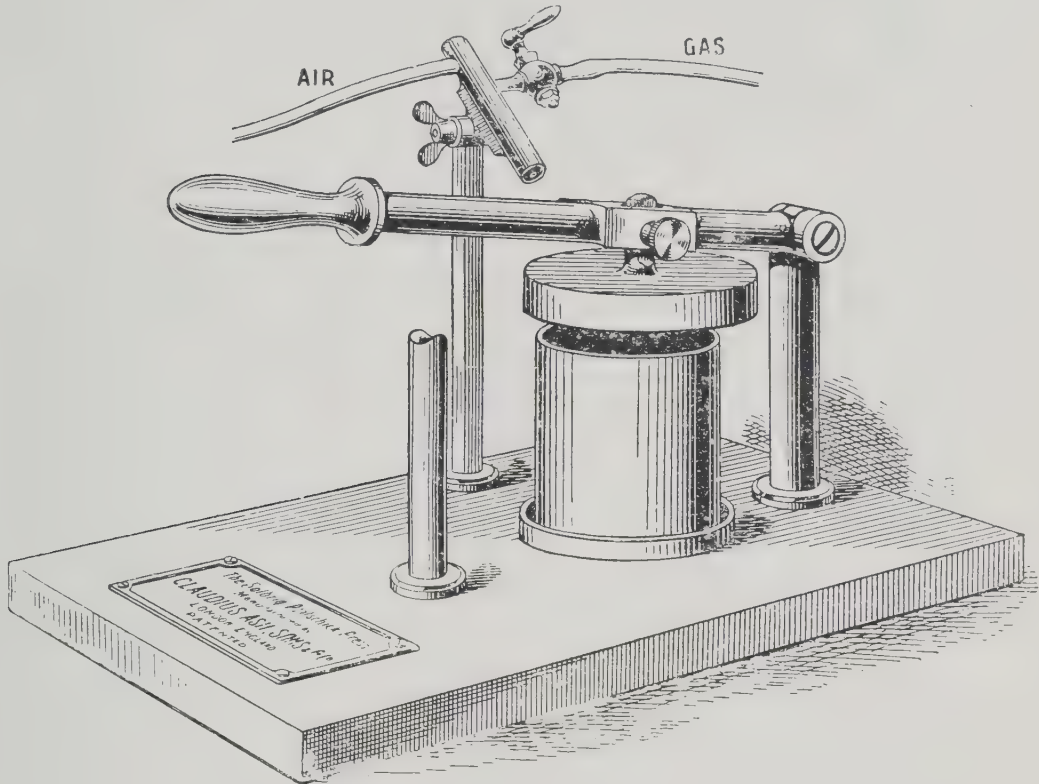
ON THE SUBJECT OF FILLING CEMENTS.

A dentist of many years standing, yet who has kept abreast of the times, writes respecting C.A.S. Cement:—I have studied cements all through my professional career and have made the most exhaustive tests to satisfy myself for the benefit of my patients, as to the most satisfactory product that is available in the way of a filling cement. After years of trial of various cements in the same mouths, I find that the best of them all is Ash's. To many young practitioners, the so-called hydraulic features in a number of the much advertised cements, presents a glamor that is well nigh irresistible, with the result that they begin their work on this class of material and keep on using it without proving to themselves the actual merits of it in comparison with others. The old and standard cement makers who have made a life study of cement tell us from indisputable knowledge that hydraulic properties certainly do not tend toward permanency in the setting of a cement in the oral cavity.

Certainly my own experience proves this fact conclusively, with the result that both for fillings and crowns and bridges, the hydraulic cements have little or no place in my office.—F.

Solbrig-Platschick Press

Is far and away the best and most complete outfit in the world for all kinds of dental casting, from the smallest to the largest work.



It is unrivalled in its suitability for casting plates for full and partial dentures, bridges, crowns, inlays, regulating appliances, splints, etc.

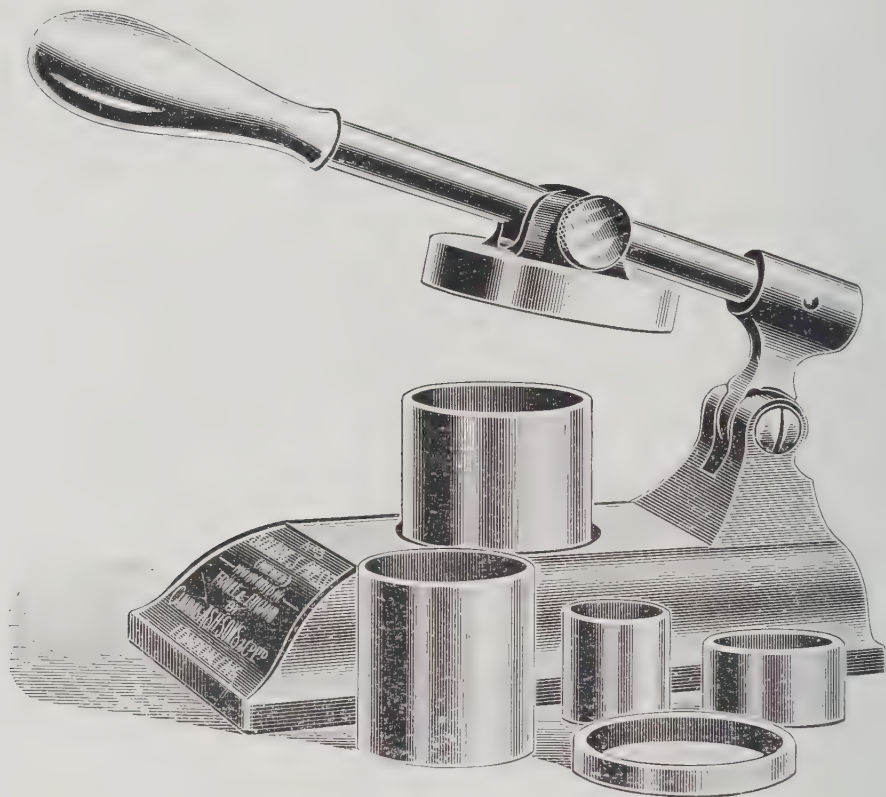
The various sizes of cylinders and caps enable the operator free choice of any size cylinder, so that one operation of investing and casting he can put through as many as a dozen inlays. The saving of time in this way is obvious. There is no brittleness about the plates cast in the Solbrig Press; the metal is tough and resilient as in struck-up and swaged plates. The appliance is made of the best materials, practically indestructible, and is never out of order. Complete with accessories, including powerful blow pipe and large heater.

Price \$60.00

Solbrig's No. 3 Press

(Patented).

For Casting of Gold and other Metals, Inlays, Crowns, Bridges, Backings, etc.



No. 2 Press and accessories consists of:—

Press,

2 Cylinders, Nos. 4 and 5,

2 Hollowing Cones,

1 box Asbestos Discs,

1 box containing—

12 Sprue Wires.

12 Rubber Bands,

12 Sticks Wax,

1 Bunsen Burner,

1 Support for Holding Cylinders over the Bunsen,

1 pair Cylinder Tweezers,

1 tin Coating Material,

1 Book of Directions.

Price with accessories, \$17.50

Cast Aluminum Dentures

(Made in Solbrig-Platschick Press).

The illustration below shows three aluminum dentures cast through one sprue. This piece of work (most easy of accomplishment) demonstrates the effectiveness and wonderful power of the press. Each of these dentures came from the cylinder with no defect or blemish of any kind, and required no polishing.



Write us respecting this work, which means both credit and profit to you. Information will be promptly and cheerfully given, and if you are in Toronto, we will gladly demonstrate the work to you.

Claudius Ash, Sons & Co., Limited

Rauhe's Suction for Cast Aluminum Dentures

In this Suction, Dr. Rauhe of Dusseldorf has given us the most successful device for Cast Plate retention yet produced.

It is made with the scientific exactness and care that have characterized RAUHE'S SUCTIONS for Vulcanite Dentures.

The Cast Aluminum Suction is a simple one to attach, and, is highly satisfactory.

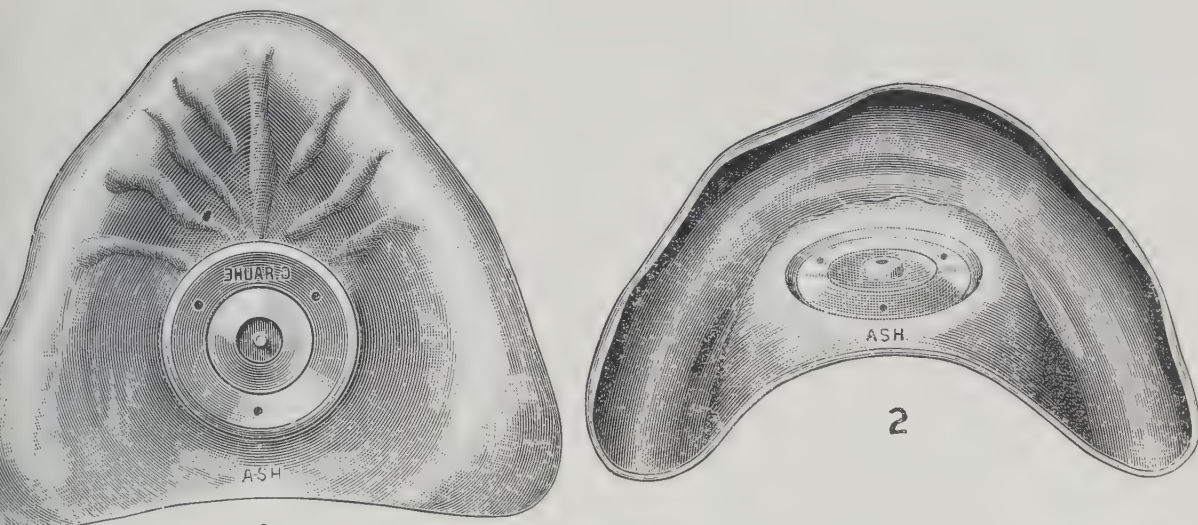
Price - - each .50

In lots of half dozen - 2.50

FOR DESCRIPTION SEE NEXT PAGE

Claudius Ash, Sons & Co., Limited

Rauhe's Aluminum Alloy Suction Discs FOR CAST DENTURES

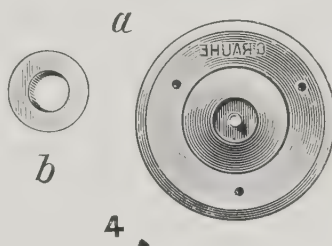
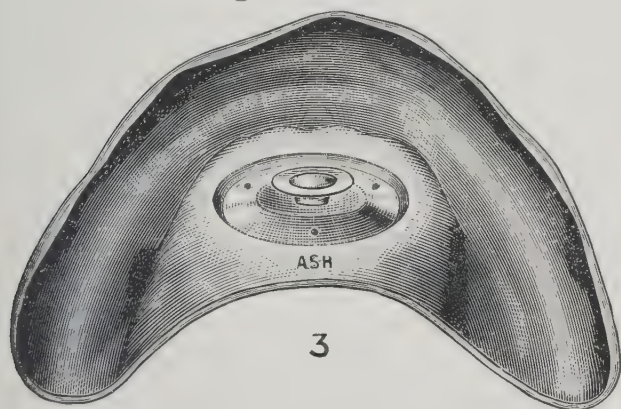


1
SHEWS METAL FORM MOUNTED ON MODEL

DIRECTIONS FOR USE

- I. Shape Metal Form (Fig. 4) to Plaster Model with fingers, and secure it in position with the small pins which are supplied with the suction.
- II. Mount the Wax Plate over the Metal Form and gently press it into position with a soft sponge dipped in warm water.

After the wax plate has been reinforced with Coating and Embedding material, it can easily be removed from the Model. Upon removal, a stud-like projection in wax is left in the centre of the metal form, as shewn in Fig. 2.



- III. Upon this stud-like wax projection gently place the Metal Stud B and fill up the centre flush by dropping a little melted wax into it as shewn in Fig. 3.

- IV. The Wax Plate is then invested and finished, after which the Rubber Disc is stretched over the stud and the Denture is ready for wear.

N.B.—To obtain the best results, the Rubber Disc should be reversed every morning by the patient.

SOLE AGENTS

CLAUDIUS ASH, SONS & CO., Limited

Solbrig Investment Material

SOLBRIG Embedding Material was the first of the so called Liquid Investments, and to-day holds the first place as a necessary adjunct to Casting

The Embedding Material is an expanding one under heat and being of a very open texture allows of free escape of air from the mould ahead of the advancing metals.

Solbrig Coating Material is of extra fine texture and painted next to the model gives the finest, smoothest finish to the metal.

PRICES

EMBEDDING MATERIAL—

3 lb. Tin	-	-	-	-	\$.75
28 lb. Tin	-	-	-	-	3.50

COATING MATERIAL—

3 lb. Tin	-	-	-	-	1.25
7 lb. Tin	-	-	-	-	3.00

Claudius Ash, Sons & Co., Limited

The Best Wax for Denture Casting **Ash's Pink Wax No. 3**

THIS preparation is ideal for the
Wax form for Cast Aluminum
Dentures.

It is of the correct thickness for this
work and is very evenly rolled.

It burns out cleanly from the mould
and leaves no carbon deposits.

Many satisfied customers use it for
all Laboratory purposes and find it
an excellent and inexpensive prep-
aration.

It requires very little heat and is
easily manipulated.

In 1 lb. Boxes - .65

Claudius Ash, Sons & Co., Limited

A Page of Good Dependable Waxes

OUR many years of experience as makers of high class Wax for Dental purposes has enabled us to put products of the highest merit at reasonable prices at the choice of the discerning Dentist.

Ash's Pink Wax, No. 3 (low heat) per lb.	.65
Ash's Pink Wax, Extra Tough	" 1.00
Ash's Yellow Wax, Extra Tough	" 1.00
Ash's Black Wax (Sticks) for Inlays per box	.35

A Mail Order, or a request from any of our travelling men will bring you prompt service. : : : : :

Claudius Ash, Sons & Co., Limited

Aluminum for Casting

If you Want the Best Aluminum Specify

“ASH’S”

If you have not already used ASH’S 99 per cent. Aluminum or ASH’S Aluminum Alloy, send in a Mail Order now.

We have many unsolicited testimonials from one end of Canada to the other.

One of our customers writes:—“Send me 20 packets ASH’S Aluminum Alloy for casting metal plates. **I find this good.**”

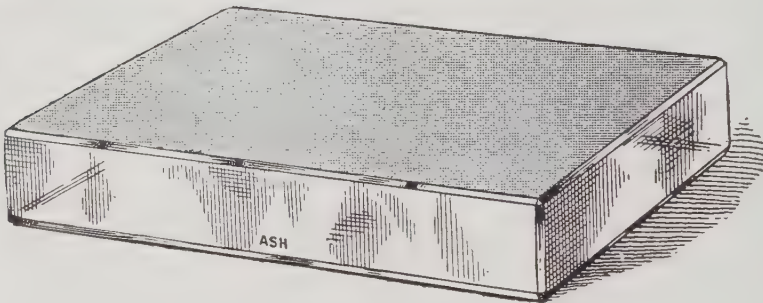
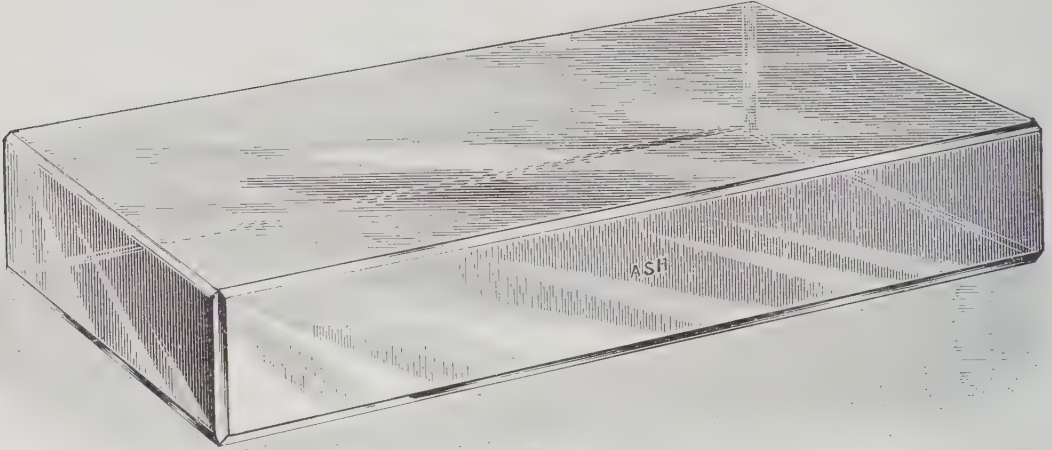
PRICES

Aluminum Ingots.....per lb.	\$1.50
Aluminum Ingots.....per half lb.	.75
Aluminum Alloy.....per pkg.	.65

Claudius Ash, Sons & Co., Limited

Ash's Large Glass Blocks

Suitable for Use in Mixing of Dental Cements



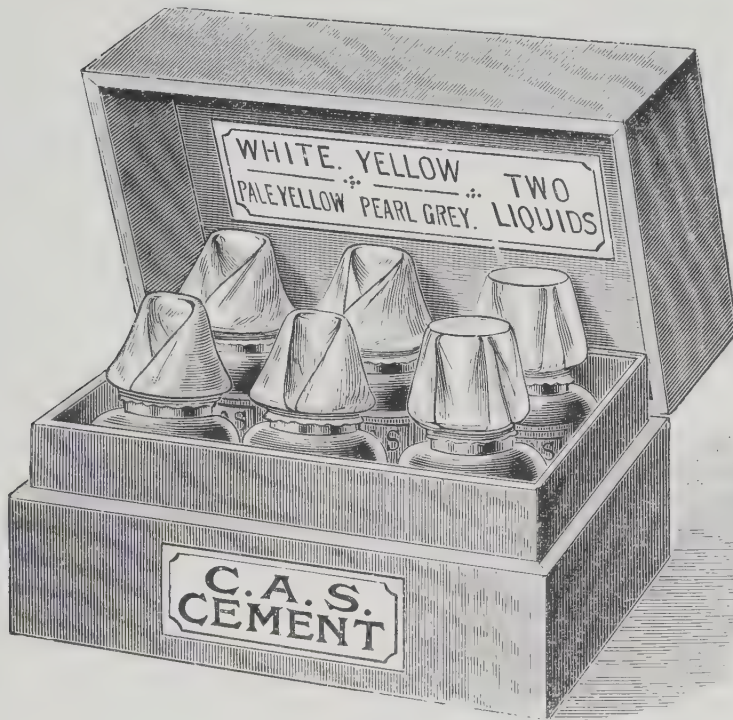
The width of these Blocks admits of their being firmly held with one hand while the spatula is manipulated with the other ; further, the length admits of a long sweep being made backwards and forwards with the spatula, which is essential for the thorough mixing of cements, and the depth affords the Operator perfect freedom in the use of his hand without danger of grazing his knuckles on the table while working the spatula.

Supplied as under :

	Long.	Wide	Deep.	Price.
No. 1—Block about	$5\frac{1}{4}$ inches	by $2\frac{3}{4}$	by $\frac{7}{8}$	.75
“ 2— “ “	$4\frac{1}{4}$	“ “ $2\frac{1}{2}$	“ $\frac{5}{8}$	.50
“ 3— “ “	$4\frac{1}{8}$	“ “ $2\frac{5}{8}$	“ $\frac{7}{8}$ ground one side..	.50

No. 3 is a useful all-round Mixing Block.

Ash's C.A.S. Cement



Supplied in the following six shades:—White, Pale Yellow, Yellow, Pearl Grey, Grey, Brown.

Noted for the following qualities:—**Easy Working, Tenacity, Stability, Imperviousness, Enamel-like Surface, Hardness and Edge Strength.**

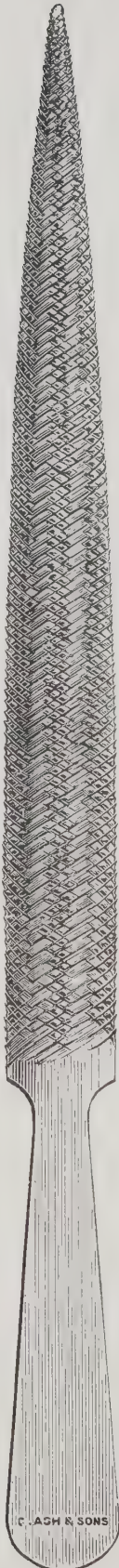
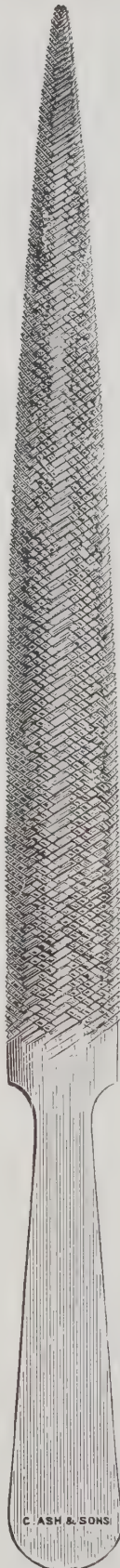
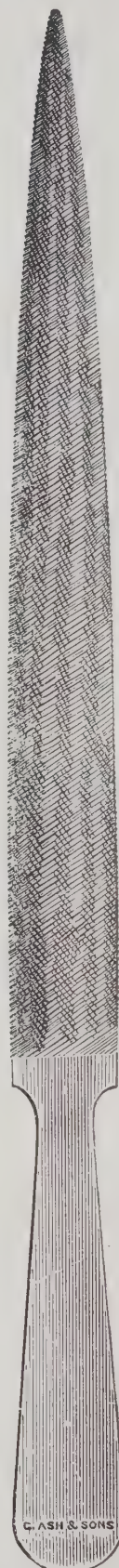
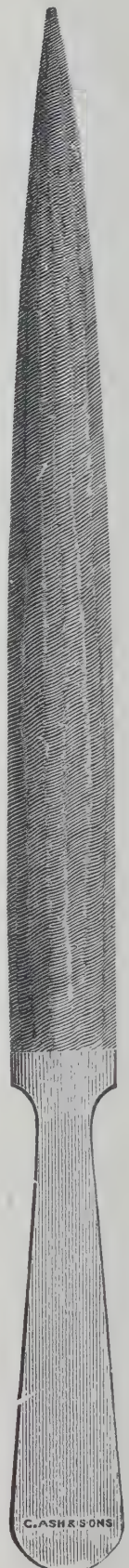
We claim that

It is unsurpassed by any Cement of the Oxy Phosphate class.

It is synthetically prepared and has stood the test of time.

1 Colour Packet, Small	-	-	-	\$ 1.50
6 Packets for	-	-	-	7.50
1 Colour Packet, Large	-	-	-	2.50
6 Packets	-	-	-	12.00
4 Colour Packet	-	-	-	2.50
6 Packets	-	-	-	12.00

Stub's Files

**Rasp****Ex. Rough****Rough****Bastard****Smooth**

Stub's Files

THE illustrations on the previous page show different styles of $4\frac{1}{2}$ inch Files, full size. In the larger sizes the cuts run somewhat coarser. The Bastard and smooth are intended for Metal Work, the other kinds for Vulcanite Work.

Stub's Files have for years been the standard of the world, and no others have approached them in excellence.

Stub's Double Ended Files For Vulcanite Work

HALF ROUND, ONE
END EXTRA ROUGH,
THE OTHER END
: : : ROUGH : : :

These Files like the single ended patterns are excellent, and after having used them you will refuse all other makes.

The prices of these Files are most reasonable.

Send us your order—it will be promptly executed.



Claudius Ash, Sons & Co., Limited

Ash's First Quality Mirrors



Ash's Mirrors, Fig. 54C
have for years been the

WORLD'S STANDARD

The lenses used in these
instruments are the best
possible and they are
mounted on the best of
handles.

LARGE — SMALL —
MEDIUM

Plain and Magnifying
70 Cents

Ash's Plain Metal Handle Mirrors

To those Dentists who desire a FIXED HANDLE Mirror of an inexpensive grade, we offer these glasses.

The sale for them has been very large and the satisfaction given is very gratifying.

LARGE, SMALL,
MEDIUM

PLAIN and MAGNIFYING

30 Cents Each

Claudius Ash, Sons & Co., Limited

Ash's Cone Socket Mirrors

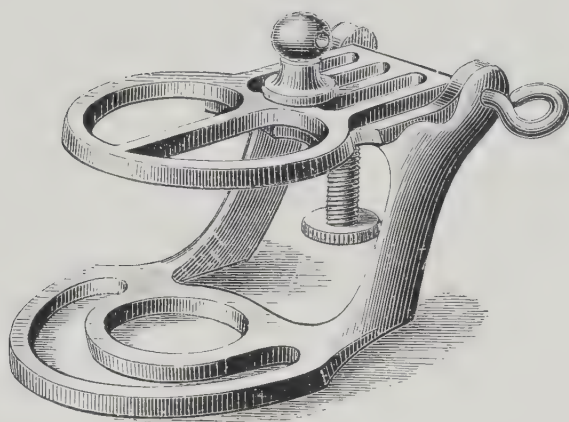


No Cone Socket Mirrors have ever been placed on this market, of a like quality at so attractive a figure, and at the published price are excellent value.

Large, Small Medium
Plain and Magnifying

Each Mirror in neat Carton. **25c.** each

A Substantial Articulator



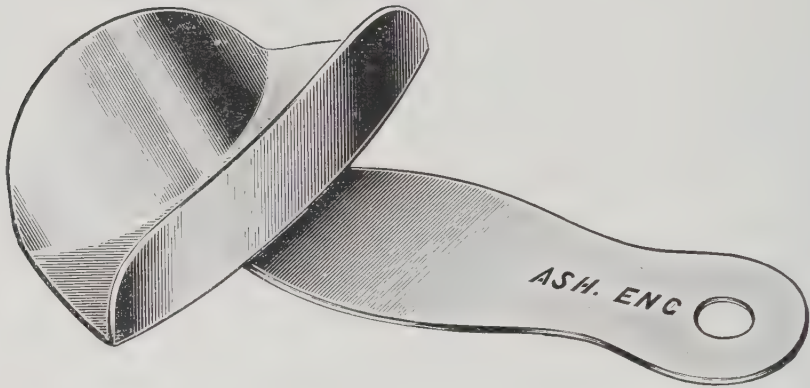
Ash's Plain Line Articulator is an article that has stood the test of years. It is a thoroughly well made British article and will give you honest service.

It comes to you in polished finish in neat card box.

PRICE - - \$1.05

Claudius Ash, Sons & Co., Limited

Ash's Fig. 3 Swivel Tray



This Tray is a superior article to many that are on the market. It is made in our own factory, and is a thoroughly reliable British product, costing you no more than those of inferior quality.

A good stock is carried in Toronto, and your wants can be promptly supplied.

Price - - 25 Cents

Claudius Ash, Sons & Co., Limited

PRACTISES FOR SALE

- FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350
- FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -
- FOR SALE—Dental Practice in Eastern Ontario Town. Good Outfit. Practice yields \$2,000 per annum. Low expense. One visiting Dentist only in same location. Population of Town, 2,500. Apply Ash & Sons - 250
- FOR SALE—Dental Practice. Welland, Ont. Good Outfit, Two Chairs. Apply Ash & Sons - - - - - 500
- FOR SALE—Dental Practice. Cobourg. Apply Ash & Sons 500
- FOR SALE—Excellent Practice. Eastern part of Ontario on St. Lawrence River. Good Equipment. Moderate Price. Apply Ash & Sons.

GRADUATE ASSISTANT WANTED — Western Ontario Town. Good salary. Apply Ash & Sons.

SECOND-HAND GOODS

- I S.S.W. Pattern Chair, Leg Base - - - - - \$30
- I Case Harvard Chair - - - - - 20
- Contents Toronto City Operating Room. New. Apply Ash & Sons.
- I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new - - - - - 60
- I Davis Gasometer, less Face Piece and Tubing, excellent condition - - - - - 18
- 2 Elgin Casting Machines with Attachments for plates, each 25
- I Wetherby Suction Machine (new style), in A-1 condition 25
- I Pelton Porcelain Furnace, A-1 condition - - - - - 25
- I Davis Gasometer
- I Mills Centrifugal Casting Outfit } - - - - - 25
- I Olympian Swager }
- I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler - - - - - 12
- I American Cabinet, No, 60, in Antwerp Oak. Practically new - - - - - 60

WARNING

IMPOSTERS ARE CHEATING DENTISTS

Many dentists have been imposed upon recently by a person or persons who offer cheap and inferior broaches in a blue-labeled package bearing the name **C. D. Mfg. Co.** of New York as manufacturers, and who represent them to be the same as Realization Broaches and made by Consolidated Dental Mfg. Co. In several respects this package has been made to imitate our own and with the initials of C. D. Mfg. Co., it has a tendency to deceive and has already deceived dentists into believing that Consolidated Dental Mfg. Co. is the manufacturer.

All Realization Broach Packages bear the blue label **B** and monogram as illustrated. Our trade mark  appears on all labels and our name is printed as follows

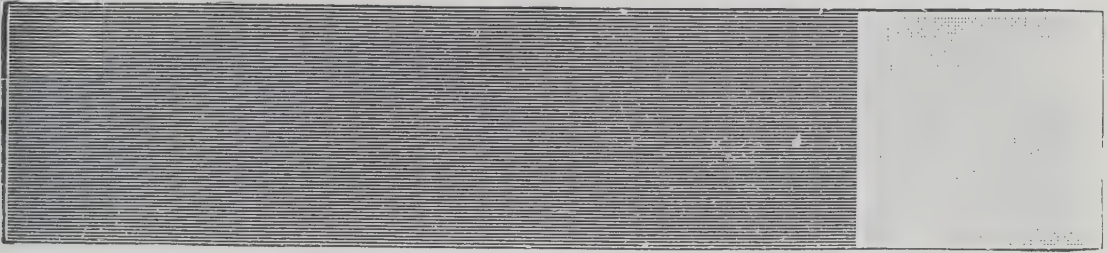
Consolidated Dental Mfg. Co.



Realization Broaches are made in our own factory and put up in only one style package. They cannot be obtained in any other way or from any other source. They are sold by reputable dealers and our retail depots. Any representations to the contrary are false and made with the intention to deceive.

CONSOLIDATED  DENTAL MFG. CO.

Ash's Articulating Paper



This Articulating Paper will be found most satisfactory in every respect. It is much superior to the Commercial Carbon Paper that is sometimes offered for Dental purposes.

Per Book 10 Cents 12 Books for 75 Cents

Richmond Dental Pellets

USED BY THE LEADING
DENTISTS

THROUGHOUT THE WORLD

MAN'G FROM THE FINEST
ABSORBENT COTTON

Price 25c.
per
Packet



For Sale at all Dental Depots or sent DIRECT POST PAID
RICHMOND DENTAL MFG. CO.
701 Confederation Life Building TORONTO

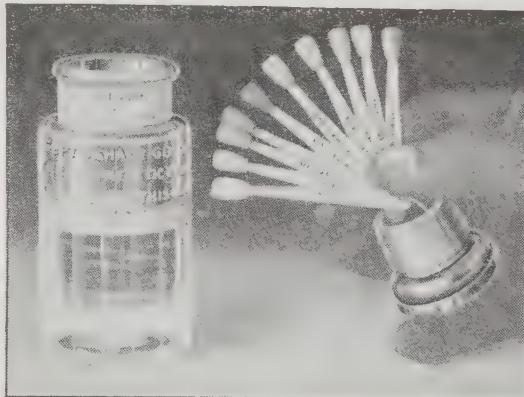


The Ideal Filling Every Time

A GAIN the "impossible" has been made possible, the "unattainable" attained. Recently one of the greatest Dentists of America, formerly the dean of a great dental college said: "I have lived to wit-

ness many wonderful things in my profession, but I did not expect to live to see a material as wonderful as DE TREY'S SYNTHETIC PORCELAIN."

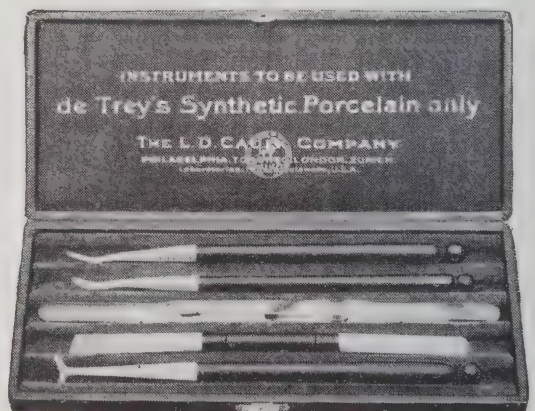
A leading dentist of Zurich told the writer of this advertisement recently that few months aminated several of Syn- inserted four years found them perfect both in and endur-



vertisement in the last he had ex- eral hund- thetic fillings three and ago and had 100 % per- appearance ance.

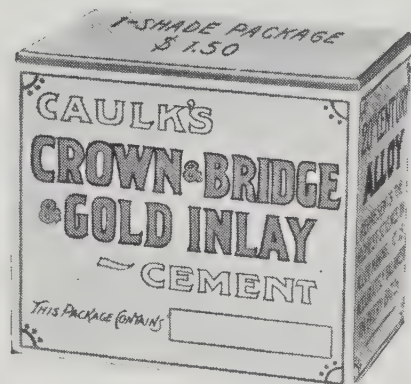
IT IS EASY TO MANIPULATE. Our Aseptic Shade Guide (\$1.50) is so ideal that it is practically necessary, for instead of approximating shades, it enables you to match them absolutely. THIS SET OF INSTRUMENTS in a case, where they should be kept regularly (\$6.50) will meet every requirement.

The L. D. CAULK COMPANY
PHILADELPHIA, Pa., U.S.A.
Laboratories, Milford, Del.



The Highest Type of Oxy-Phosphates

TESTED in the laboratory or tested in the mouth these cements show strength unequalled, and a degree of insolubility that approaches the absolute. They are submarine in nature, and after setting are impenetrable. So absolutely are these statements proved that we are willing to submit to any competitive test that is fair and that has meaning.



PETROID CEMENT IMPROVED is peculiarly adapted for fillings. There are eight shades, which are produced in the calcination.

CROWN & BRIDGE & GOLD INLAY CEMENT is especially adapted for setting Facings, Crowns, Bridges, Caps and Inlays. It is made in six shades.

Single Shade Package, \$1.50

Four Shade Package, 4.50

Full Equipment Package, containing 6 double portion liquids and powders (any combination)
\$15.00.

THE L. D. CAULK COMPANY

PHILADELPHIA, Pa., U.S.A.

Laboratories, Milford, Del.

The Time Saver in Dentistry

Are You Using the Universal Filling Gold ?

INTRODUCTORY PACKAGE

10 Pluggers	\$5.00
1 Handle	1.00
1-8 Oz. Gold	5.00
Morocco	
Plush Gold Case	1.00

Sold by All Dealers or
THE WILLIAMS GOLD REFINING COMPANY
 BUFFALO, NEW YORK

WHOLE OUTFIT \$6.00

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
 FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

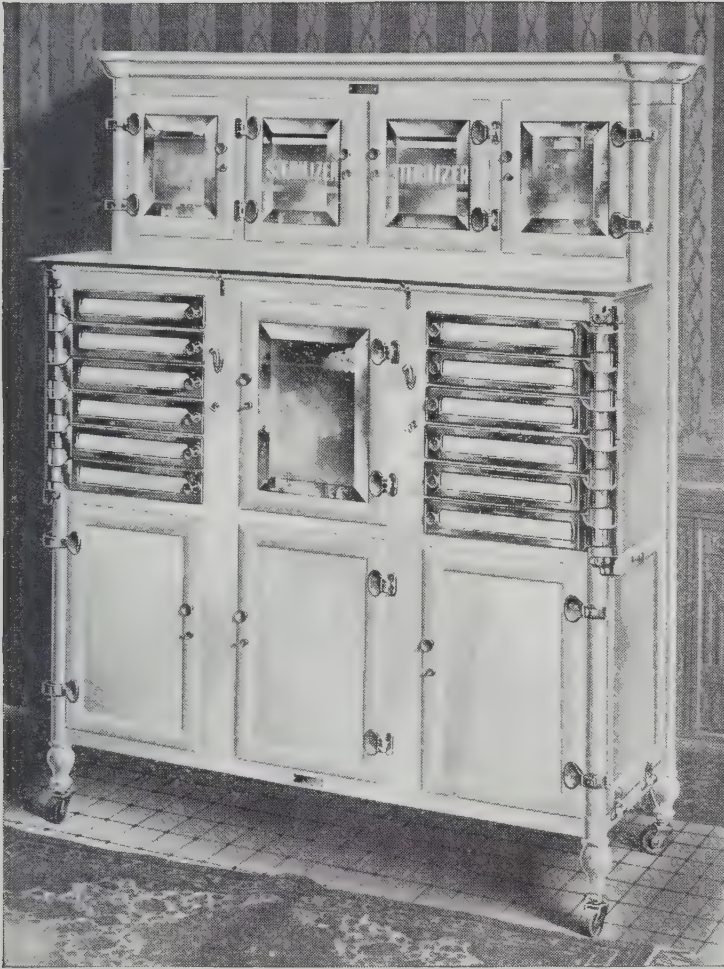
The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

AFTER HOURS N. 4284

EVOLUTION



¶ We've evolved the Pressed Steel Aseptic Cabinet into what can virtually be called a seamless steel box. Every seam in its construction is welded by an acetylene welder, which process eliminates seams. Where rivets are employed, an electric riveter is used. All of these processes produce a cabinet of exceptional strength.

¶ Furthermore, before the six coats of white enamel are applied to its surface and baked on, the cabinet is sand-blasted

with a sand blast of tremendous velocity, producing a frosted surface of microscopic pits, which causes the enamel to grip and adhere very much better than ever before.

¶ Pressed Steel Aseptic Furniture costs more because it's worth more and earns more—for you.

¶ Perhaps that cabinet of yours is a wooden one. Perhaps it's a beautiful piece of work, but—

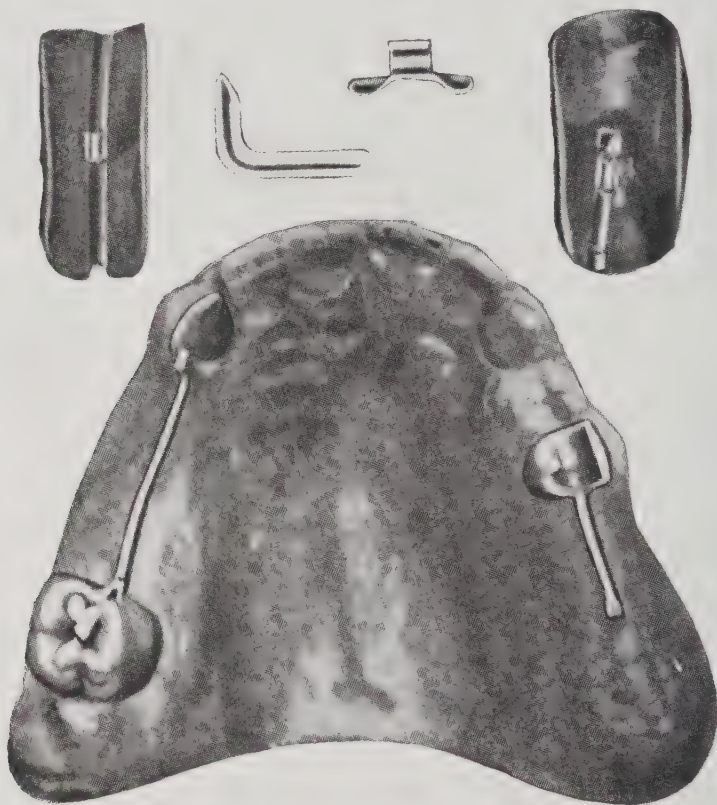
¶ Eventually you'll buy a Pressed Steel Aseptic Cabinet, because those dentists who **have** bought are getting the cream of the dental business. They're getting and holding the patients who are paying 25% to 40% more for their work because they get a guarantee of absolutely aseptic methods.

Send for the picture book.

LEE S. SMITH & SON COMPANY
PITTSBURG, U.S.A.

Removable Bridgework

WHILE fixed bridgework will always find a place in the practice of dentistry, conditions arise wherein fixed work is not indicated. Under such circumstances, the operator owes it to his patients to prescribe a denture that will accord them service, and be removable, the latter feature being desirable from the standpoint of prolonging the life of the piers to which the substitute is attached, together with the recognized fact that a hygienic condition of the oral cavity cannot be maintained in mouths carrying large pieces of non-removable work.



Represents the preparation of the mouth to insert first molar and the bicuspid. In this case, the molar being loose the angle bar is converted into a splint by making it continuous to cuspid. To provide against lateral movement or rocking of the piece the angle bar is made prominent in its vertical arm, the groove in the rubber engages the bar as shown in illustration.

WRITE US ABOUT THIS

CHARLES L. DALY

11-13 GRENVILLE STREET, TORONTO

Telephone North 5776

Could You Make Money

If you **guaranteed satisfaction or no pay** and then did not satisfy?

NO! OF COURSE NOT---

Neither could we.

OUR success is due to the fact that Dentists who give the preparations "**DENTINOL**" and "**PYORRHOCIDE**" a thorough trial, know that Pyorrhea can be successfully treated and loose teeth can be tightened. It's the continual repeat orders that show the profit.

Order from **your own** Dental Depot.

Dentinol (2 oz. bottle)	-	-	-	-	\$ 1.00
Dentinol (small bottle)	-	-	-		.50
Pyorrhocide (4 oz. can)	-	-	-	-	1.00
Pyorrhocide (in doz. lots to Dentists only)					10.50
Dentinol Perfect Syringe	-	-	-		2.50
Improved D. P. Scalers (set of 12)	-				9.00
Improved D. P. Files (set of 8)	-	-			8.00

The Dentinol @ Pyorrhocide Co.

1 Union Square W.,

New York City, U.S.A.

WE CAN PROVE

That an upper and lower denture can be articulated properly without being touched with a grinding wheel by using

Justi True to Nature Teeth Anteriors and Posteriors

This means that the slightest detail has been worked out on a scientific basis in accordance with the ideas of the best authorities.

Can Supply in—

Plain Rubber—Anteriors and Posteriors platinum pins.

Plain Combination Sets — Anteriors platinum pins; Posteriors diatoric.

If your dealer cannot supply them order direct.

H. D. JUSTI & SON

Philadelphia

Chicago



Clark New Model Double Bowl
(With Finger Bowl Attachment)

DO YOU WANT TO SWAP

Your old spittoon for a Brand New "CLARK." We will make you **an allowance** for your old one in exchange for any type illustrated in our catalog. (Single or Double bowl) ranging in price from

\$35.00 to \$65.00.

Write for our Catalog and Exchange Proposition

This is a **RARE OPPORTUNITY** to replace your spittoon for one of the refined **CLARK SPITTOONS**, equipped with all the modern **HYGIENIC** and **SANITARY** conveniences that delight your patients.

In writing for quotations, please state the make of your spittoon.



Clark New Model Single Bowl
(Finger Bowl Applicable to this Model)

A C. CLARK & CO.,

GRAND CROSSING,

CHICAGO

Second-Hand Goods

- 1 Harvard Late Model Chair, A1 shape
- 1 Harvard Mechanical Lift Chair
- 1 S.S.W. Diamond, nearly new
- 1 S.S.W. Wilkerson Round Base, in good shape, with
Cane Upholstery
- 1 S.S.W. Wilkerson Leg Base, fair shape
- 1 McLaren Leg Base
- 1 Ritter D.C. 110 Volt Overhead Engine
- 1 Ritter A.C. 110 Volt 60 Cyl. Wall Type All Cord
Engine
- 2 Bellows
- 1 Ash Sterilizer
- 2 Brackets and Tables
- 3 Dental Cabinets

These goods have been taken in exchange for other goods and are real bargains.

Write us for particulars and prices.

We refine or buy your scrap gold and platinum and repair your Hand pieces, etc.

Yours very truly,

NATIONAL REFINING CO., Limited

We Know How

Others May Copy.

OUR FIRST PRINCIPLE:

To Produce Metallurgical Supplies of
Highest Merit.

A SECONDARY BUSINESS CONSIDERATION:

A Secondary Class to Meet Competitive
Market Conditions in Cheapness.

Examples :

Our "Regular" Gold Solder, No. 18, is 16 karat quality
—contains $69\frac{1}{3}$ c of Pure Gold and sells at 85c. a dwt.

Some other makers of Solder in Canada supply an
article that by repeated analytical test in independent
laboratories, assays between 12 and 13 karat, contains
52 to $56\frac{1}{3}$ c of Pure Gold and sells at 80c. a dwt.

Your Choice:

$69\frac{1}{3}$ c of Gold delicately
alloyed with purest of ele-
mental metals for 85c. a dwt.

OR

52c. to $56\frac{1}{3}$ c. of Gold with
extra Copper to maintain
color, lacking technical super-
vision, for 80c. a dwt.

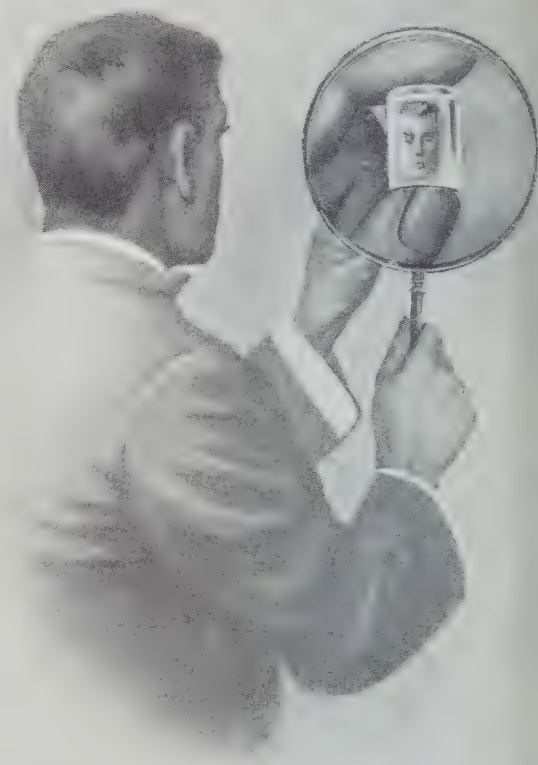
Highest Quality Jealously Guarded.

The J.E. WILKINSON COMPANY, LIMITED.

The Better the Finish the Better the Work

¶ A crown or bridge with a fine finish is better than with a rough surface. The fine finish condenses the surface just enough to close the pores a little. It prevents the adhesion of deposits, resists better the attacks of chemicals contained in the food, is more welcome to the tissues, and is better in all ways.

¶ Such finish is now made easy for the dentist by the use of



Ney's Mirror Finished Seamless Gold Shells de Luxe

in which we give a mirror finish to the gold during the process of manufacture. This finish condenses the gold of the surface, as you would do it by hand burnishing. This finish may be carried throughout the operations of crown or bridge making.

¶ Crowns made with these shells are of unequalled beauty and hygienic value.

PRICES

	1 dwt.	20 dwt.	100 dwt.
22K Dark or Light, 30G	\$1.07	\$1.02	\$1.01
22K Dark or Light, 28, 29, 31, 32G	1.09	1.04	1.03

Paper labels discontinued.

Shells stamped on the inside.

TWENTY-EIGHT SIZES.

FIVE LENGTHS.

Ask your dealer to show them to you---then ask us.

THE J. M. NEY COMPANY, Hartford, Conn., U. S. A.

ASH'S INLAY and CROWN CEMENT

EXTRA TENACIOUS :: EXTREMELY DENSE :: VERY
DURABLE :: NON-EXPANDING :: HIGHLY RESISTANT
:: :: TO THE FLUIDS OF THE MOUTH :: ::



¶ The leading features of this cement are its unyielding tenacity, extreme density and durability.

¶ It has the highest non-expanding qualities which it is possible to impart to a first-class osteoplastic cement.

¶ Supplied in the following shades: White, Pale Yellow, Yellow, Pearl Grey.

1 shade packet	-	1.25
4 shade packet	-	3 00

Claudius Ash, Sons & Co., Ltd.

Veza's Patented Automatic Flask Compressor

This Compressor possesses the following advantages :

- Prevents porosity in the rubber,
- Ensures uniform thickness, flexibility, and strength.
- Secures faithful reproduction of any inequality on the plaster model without the least alteration.
- Applies gradual and steady pressure to the flasks when the rubber is in the most plastic condition.



Made of the very best British Steel and is provided with wedge and key. The key serves for fixing and releasing the compressor and for lowering it into and lifting it out of the vulcanizer. One turn of the screw beyond the tightening-up stage gives a pressure of 70lbs., two turns 140lbs., and three turns 210lbs. It acts quickly, and no other press is required. All forms of flasks can be used with it.

Supplied in 2 and 3 flask size - - each, \$3.00

ASH'S CANADIAN MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

CLAUDIUS ASH, SONS & CO. LIMITED.

CANADIAN BRANCH,

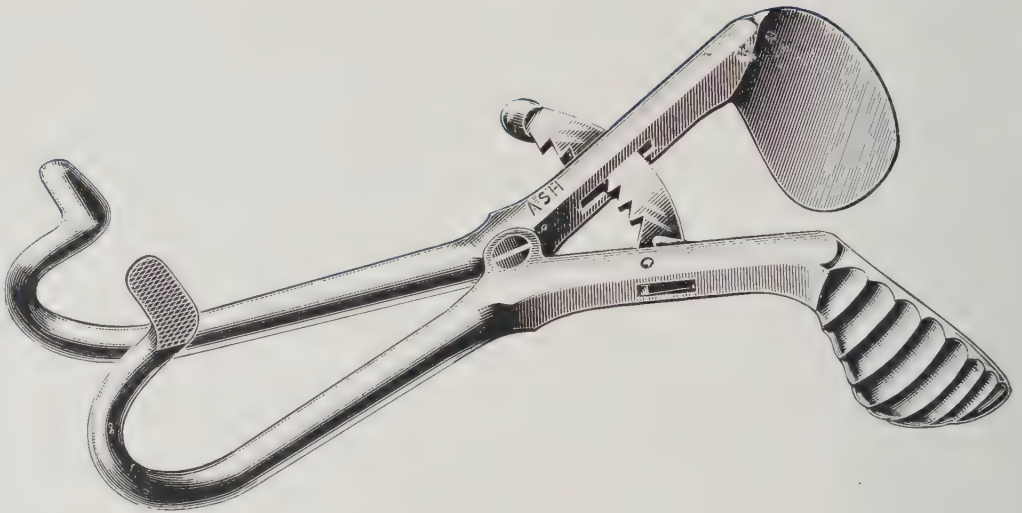
11-13 GRENVILLE ST. TORONTO, CANADA.

MAIN DEPOT

LONDON, W. ENGLAND.



..BUXTONS GAG..



¶ This gag has long been the premier article of its kind.

¶ In addition to being a perfect gag, it is most useful as a mouth opener, the beaks being so constructed that one falls below the other, and they can be forced between the upper and lower teeth.

PRICE - \$4.50

CLAUDIUS ASH, SONS & CO.
LIMITED

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APRIL, 1913

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T cannot be too deeply impressed on the mind that application is the price to be paid for mental acquisitions, and that it is as absurd to expect them without it, as to hope for a harvest where we have not sown the seed

In everything we do, we may be possibly laying a train of consequences, the operation of which may terminate only with our existence.—*Bailey.*

*Essay on the formation and
Publication of Opinions.*

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, APRIL 1, 1913

No. 7

A FRICTION DENTAL POLISH vs. GRITTY INGREDIENTS FOUND IN TOOTH POWDERS AND PASTES.

By J. P. Carmichael, D.D.S., Milwaukee, Wisconsin.

It is the exception when we see a clean, healthy mouth in a human being. Compare the mouth of any animal and recall what a perfectly healthy, clean mouth you always found. Then you can say to yourself, why is it that the human teeth should appear so dull and lifeless, often half covered with stain and tartar and the gum red and swollen; a glaring example of neglect, and a condition laden with pathogenic germs, at the very threshold of our digestive organs; ready to contaminate and pollute the entire system. Specialists to-day are numbering diseases by the score due to infection from an unhealthy condition of the mouth.

The polish or gloss of enamel was put there by nature to protect the teeth from diseases. If this highly glossed surface of the tooth enamel was retained, foreign matter could not readily adhere and if the surfaces were always polished to the gum margin, the teeth would not decay, nor would there be Dental Pyorrhoea.

Consider for a moment, what then is necessary to keep the enamel of the teeth in a condition so smooth and gleaming, that matter will not adhere to it; a condition we always see in the dog's tooth, clean and shining. Enamel of the teeth is extremely hard, as hard as glass, and when its surface is once marred it has been a most difficult problem to so smooth it, as to again restore the luster.

In primeval days when human beings lived close to nature, the teeth were used for grinding dry, coarse foods, and the friction of mastication kept the surfaces polished and healthy; to-day many of our foods are prepared requiring little or no mastication. We are well advised of the destructive effects caused by deposits remaining long upon the teeth and the patient is at once convinced of the uncleanly condition of the teeth by using a disclosing solution. The first formations that adhere to the enamel and destroy the luster, and which are not visible, can readily be detected by applying this solution, which is painted

over the entire crowning of the tooth, and is readily washed away from the enamel, where the gloss remains unaffected.

This test clearly reveals that the first adhesions formed upon the teeth are about the necks, at the gum margin, and between the teeth; this is due to plaques (or scales) which are an exfoliation of the gum tissue, which combined with abnormal secretions, adhere so closely upon the enamel that they are not removed by the tooth brush.

Upon the neglected teeth, these exfoliations adhere, where there is the least friction; we then have a foundation for other deposits, combining food and sticky substances, that gather in quantities sufficient to produce decomposition. The bacteria multiplying in the decomposition of these deposits is generally accepted as the primary cause of the dissolution of tooth issue, resulting in caries; and the same microbic action may well be regarded as the primary cause of Pyorrhoea.

Our first prescription has always been the tooth brush, which is very beneficial in removing loose particles of food, and to stimulate healthy action to the gums; but it will not remove from the teeth the adhesions mentioned, and which are the most harmful.

Our next step has usually been to advise the use of some substance in the form of tooth powders and pastes applied by means of the brush, that would clean the teeth by a scouring process; this, I contend, is where we have made a grave mistake. If by our treatment we are to prevent disease, then let us begin by restoring the brilliancy, so that it is possible for the enamel to more easily ward off this foreign deposit.

All the substances in general use for cleaning teeth are harsh and gritty; though they be very fine grit, they accomplish the purpose only by a scouring process, thus gradually destroying the natural gloss of the enamel. Although these scratches are not visible to the naked eye, they are sufficient to destroy the brilliancy, and leave the surface all the more susceptible to receive foreign adhesions; in other words, the more we scour the teeth, the more we must scour, to keep them clean; to say nothing of destroying the life luster; as proof of this, it is only necessary to dry the teeth to disclose the fact that the enamel gloss has been dulled.

It may be necessary, nevertheless, for the dentist to apply a very finely powdered abrasive, to remove stains in cleaning teeth, and this should not be used over the entire surface of the teeth, but confined to the stained area, using a preparation of a character that will not scratch.

Experience has proven that a friction dry rub is not only more effective in removing the adhesions, but the life luster becomes more intensified. Carmi-Lustro is a friction polish that possesses enough resistance when applied dry by a rubbing pro-

cess, to so smooth the surface as to bring the real life luster to the enamel. This preparation is the result of a newly invented process which consists of calcining certain minerals, including a combination of rare earth nitrates, at very high temperatures. By this process of treatment, an impalpable powder is obtained, having peculiar properties specially adapted for polishing very hard substances without any scratching effect. Even a porcelain tooth may be polished with it and given a life-like appearance; this result has never before been attained. The product of this process is medicated by the addition of certain substances, as follows:

Rx. Mineralis Calcinatae.

Betanaphtholi

Zinci Oxidi

Acidi Borici

Ol. Aromatici, q.s.

It is the result of many years of study on the proper prophylactic treatment of the teeth; I have applied the principle in my practice with notable success over many years and since I perfected the compound I have held many clinics among brother practitioners. They are in accord with my contentions, and I am gratified at the volumes of complimentary attestations of their favorable reports in practice.

Instruct patients for home treatment to dry the teeth and apply CARMILUSTRO daily with linen cloth, or cotton roll, rubbing them vigorously. The more constantly this course is followed, the more beautiful and highly polished will the teeth become.

Dentists may instruct their patients how they may tape and polish the necks of the teeth. Inform your patient that after the polish has been restored to the teeth, any gritty substance they may apply will presently destroy the luster. All tooth powders contain powdered pumice or prepared chalk. Pumice is found in volcanic eruptions, and is a stone hard enough to scratch glass; and precipitated chalk, although it may be reduced to an extremely fine powder, being of crystalline formation, is sharp in its effects, and will dull the high polish of the enamel of teeth.

Dr. F. H. Skinner, in a paper on Prophylaxis, says: "It is universally agreed that neither Pyorrhoea or decay is found when surfaces have been kept smooth and polished; that all decay is the result of by-products of bacteria, which can only be removed by friction."

The enamel must be kept so brilliant that the teeth will ward off disease. To accomplish this, we must adopt those measures that will restore the teeth to a state of nature, which is in line with the highest attainment in dentistry.

LARGE RESTORATION WITH AMALGAM.*

By J. M. Lewis, M.A.C.D.

The object of this clinic was to show that many badly broken-down teeth which are now crowned with gold shell-crowns may be saved by the judicious use of amalgam, and made to do duty for many years.

By the use of amalgam the great disadvantage, if not actual danger, of having a metal band below the free edge of the gum is quite obviated, and the healthy coral-pink of the gums about a tooth treated in such a way is Nature's tribute of thanks to the operator who does it.

It is by no means a difficult operation, and only demands for its successful completion a recognition of the principles laid down by Black and others—i.e., that all carious dentine and the areas likely to decay be removed, and that such a shaping be given to the walls which remain as shall be consistent with strength and harmonious lines. In all operations of this extensive nature it is, of course, necessary to use some means of anchorage which shall be quite independent of the tooth walls, and this is to be obtained by the use of a post or posts securely anchored in the canals.

In the present instance, one of the members of the Congress—Mr. T. White, of Melbourne—very generously offered himself as a patient. The tooth to be operated on proved to be the second lower molar on the right side. It contained already a large amalgam filling, which had been devitalised some years before.

The tooth, however, presented a very broken-down appearance, as caries had undermined the old filling, and the enamel walls were fast breaking away.

The method of procedure was, briefly, as follows:—The old amalgam was removed, and the carious dentum *cero* next. The doubtful enamel was taken away, as well as those walls which, though unattacked by disease, were so weak as to seriously endanger the finished filling. When this had been done the only parts of the original crown remaining were the gingival quarter of the buccal wall, and rather more of the lingual enamel. The enamel of the mesio- and disto-approximal surfaces were removed to the gingival. So little of the crown remained that the safe anchorage of the amalgam became a serious question; but the difficulty was finally overcome by cementing two German silver posts into each root with Caulk's cement, allowing the posts to lean together somewhat, thus affording a better dovetailing of the amalgam into them. Having done this, the tooth was surrounded with a Koh-i-noor celluloid matrix, and the amalgam was packed in. When this had sufficiently set, the matrix was slit with a sharp knife and removed, and the amalgam of the occlusal surface carved to represent the natural tooth.

* From the Transactions of the Third Australian Dental Congress.

DENTAL FORCEPS

The illustrations of Forceps in the following pages represent some of the most improved forms in general use, which have met with the approval of the best Operators. The upper part of each is drawn nearly full size, in order to give a clear view of the construction of the beaks. To facilitate reference, the Forceps are placed in numerical order according to the numbers by which they are known. It should be noted that the words "for the right or for the left side of the mouth," employed in some of the descriptions, means the right or left side in the patient's mouth.

We have devoted special attention to this branch of our business for more than half a century, during which time we have availed ourselves of the suggestions for new Forceps and for modifications of existing forms made by the most eminent practitioners in the Dental Profession, including the late Sir John Tomes and other Operators whose names have never been formally associated with the instruments which they designed. All our Forceps are made of the best steel, nickel-plated, and we can confidently recommend them for lightness, strength, temper, finish, and accuracy of adaptation. The beaks of each are made to fit the teeth for which they are intended so perfectly that a firm grip can be obtained and sufficient pressure applied for the removal of any tooth without danger of crushing the crown.

NOTES

During cold weather Forceps should be warmed by being placed in hot water before they are used. The best tempered steel is liable to snap during the winter months if this precaution is neglected.

All our Forceps are supplied to order in polished steel—not nickel-plated—with black handles at 25c each less than advertised prices.

Forceps, nickel-plated, can be had with the checkered parts of the handles Blacked over the Nickel at 15c each extra.

Special Forceps made to Operators' own patterns, and submitted in the rough state for approval before they are finished.

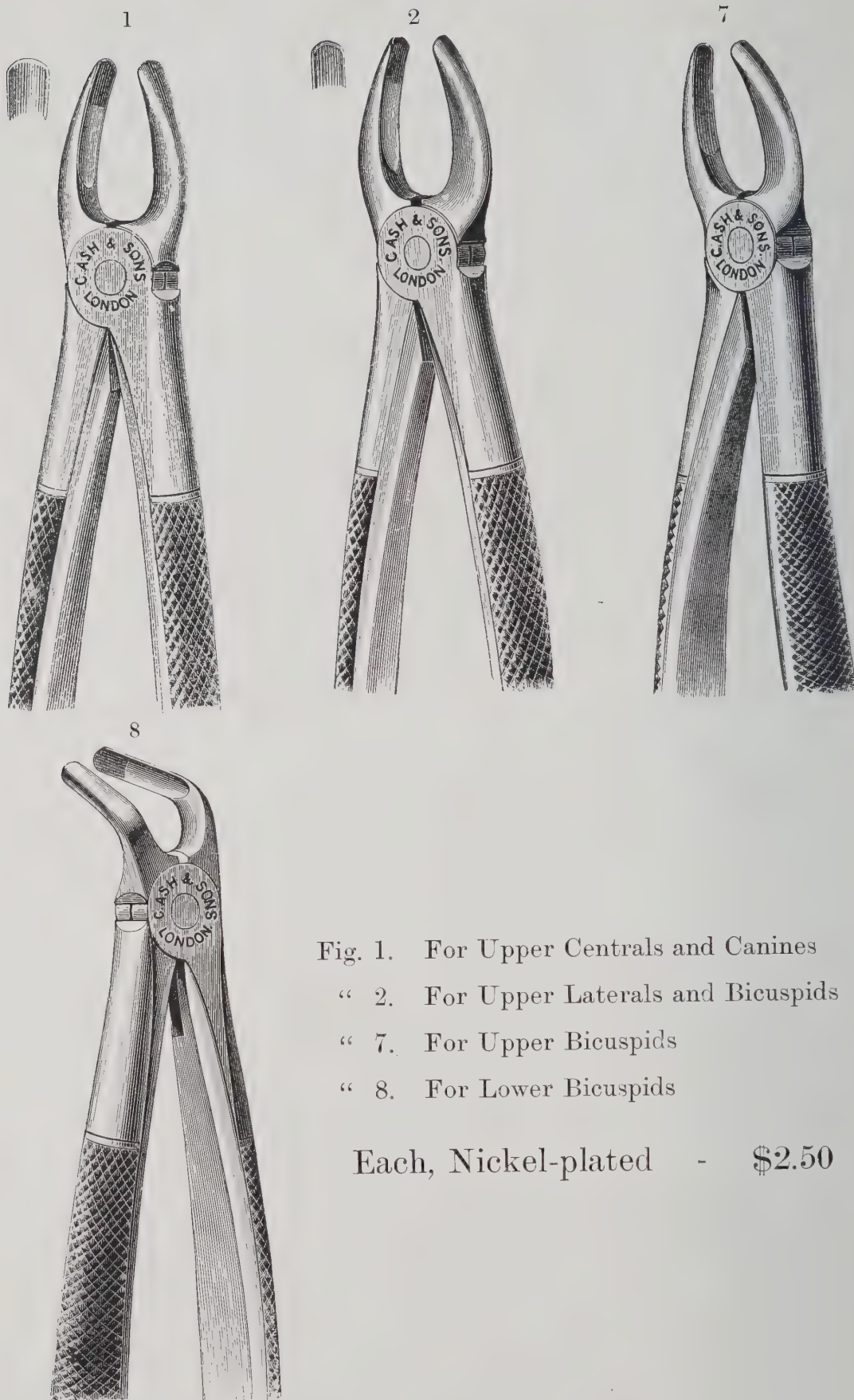
Forceps repaired, re-polished and re-plated at moderate charges.

All forms of American pattern Forceps kept in stock or made or obtained to order.

A Catalogue of our complete list of Forceps is yours for the asking.

Claudius Ash, Sons & Co., Limited

Extracting Forceps



Each, Nickel-plated - \$2.50

Extracting Forceps

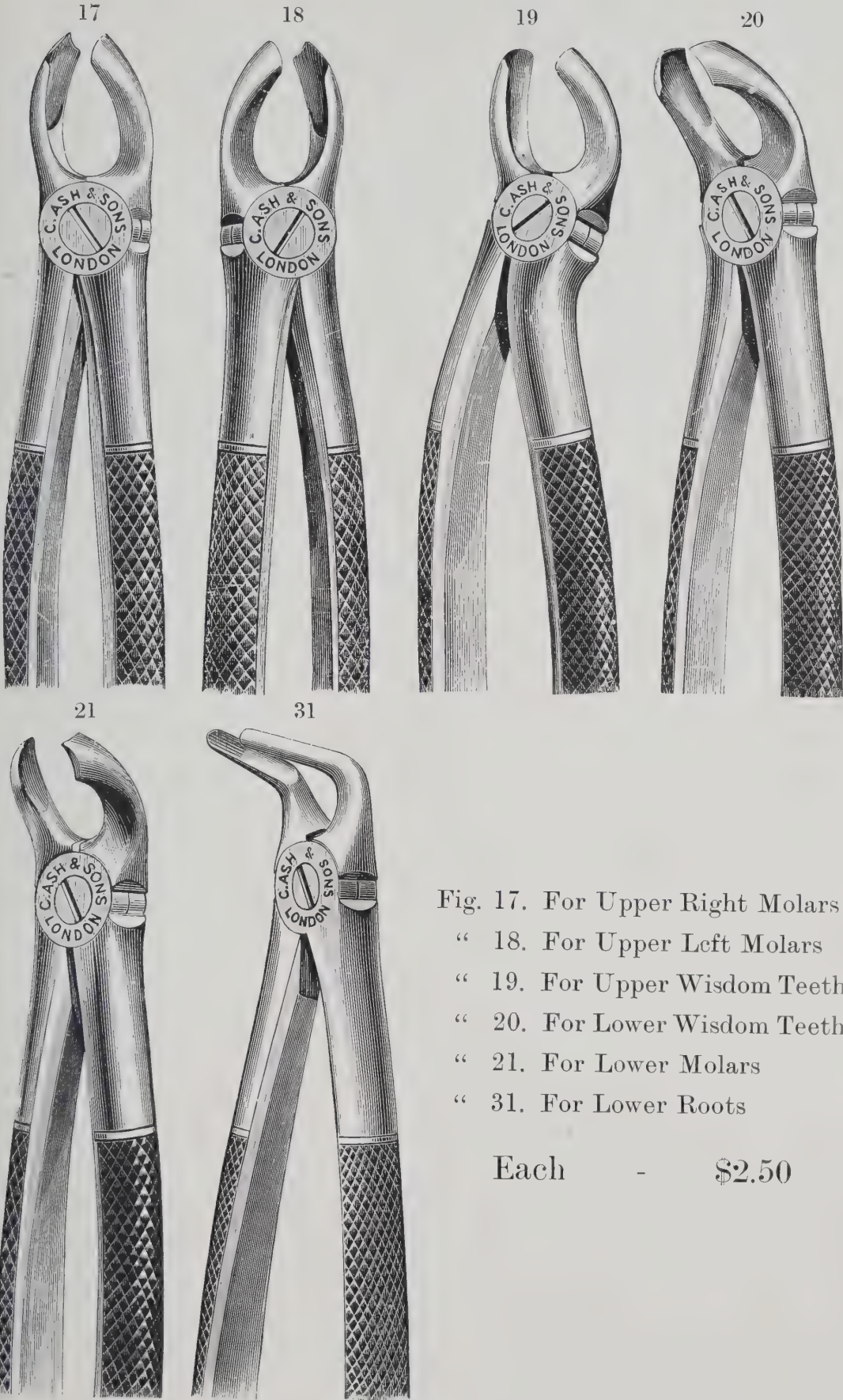


Fig. 17. For Upper Right Molars
“ 18. For Upper Left Molars
“ 19. For Upper Wisdom Teeth
“ 20. For Lower Wisdom Teeth
“ 21. For Lower Molars
“ 31. For Lower Roots

Each - \$2.50

Extracting Forceps

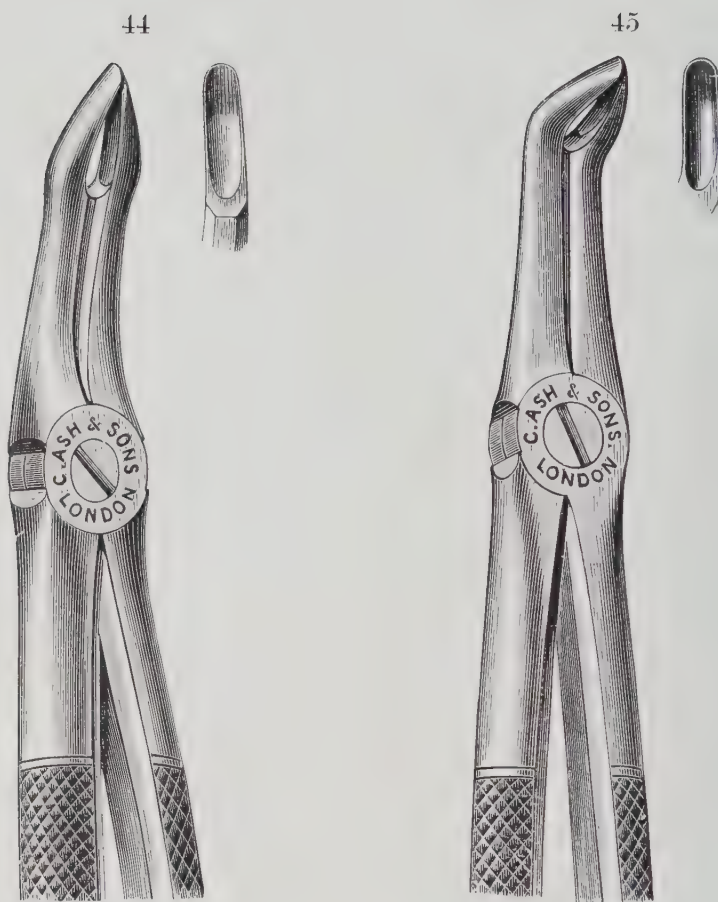


Fig. 44. For Upper Roots

“ 44 *S* (not illustrated. Same shape as Fig. 44, but smaller in build and with narrower beaks

“ 45. For Lower Roots

Each, Nickel-plated	-	-	-	\$2.50
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Extracting and Splitting Forceps

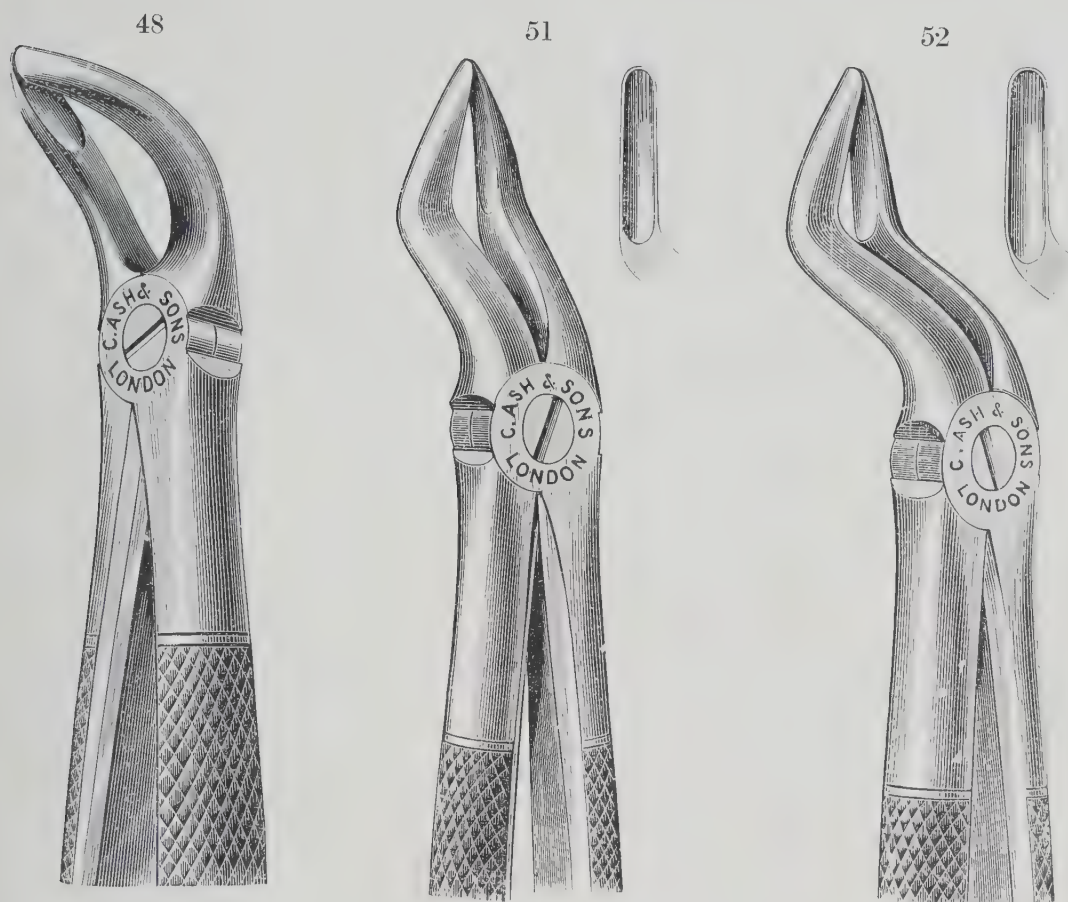
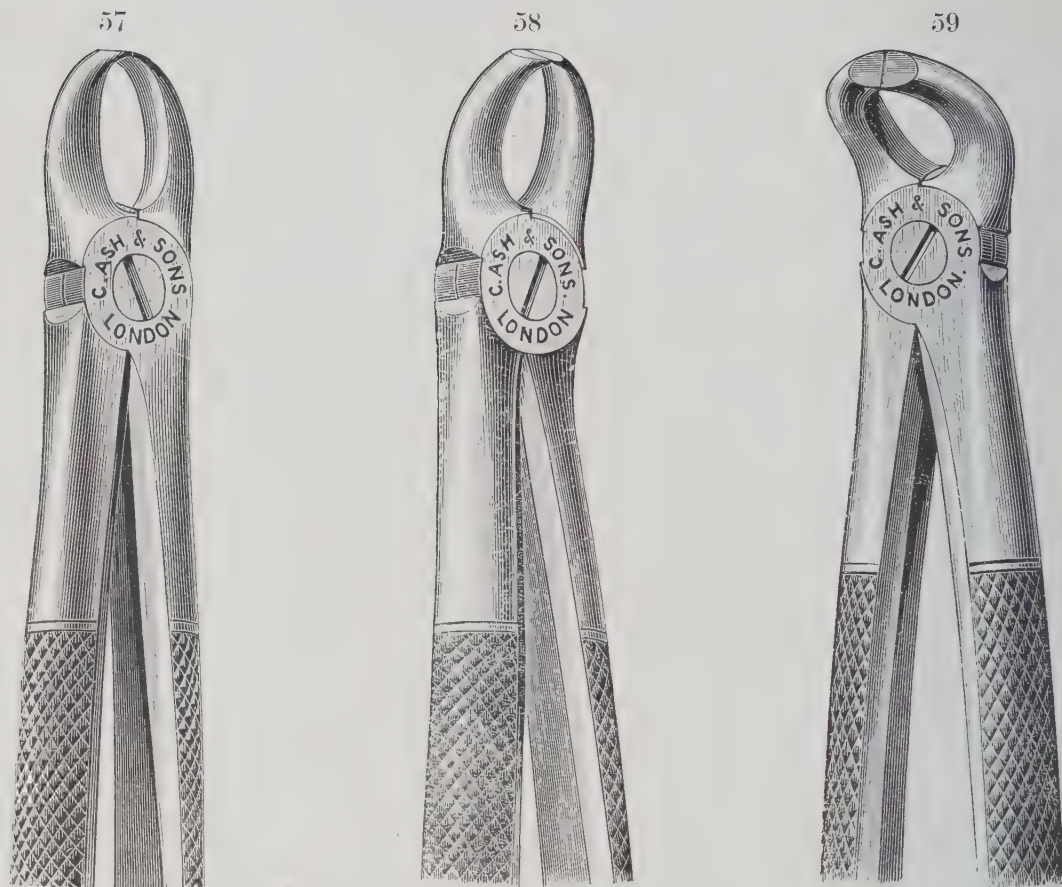


Fig. 48. For Lower Roots
 " 51. For Upper Roots
 " 52. For Upper Roots

Each	-	-	-	\$2.50
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Excising Forceps



When preparing roots for pivoting, etc., it is not safe to use these exercising Forceps until the portion of the tooth to be removed has been already partly cut through (see Fig. A). Neglect of this precaution may result in the root being splintered longitudinally.—See “Tomes’ Dental Surgery,” 3rd edition, page 756.

- No. 57. For excising Upper Teeth, broad, medium and narrow.
 No. 58. For excising Upper Teeth, broad, medium and narrow.
 No. 59. For excising Lower Teeth, broad, medium and narrow.

Each, Nickel-plated - - \$2.50

Extracting Forceps

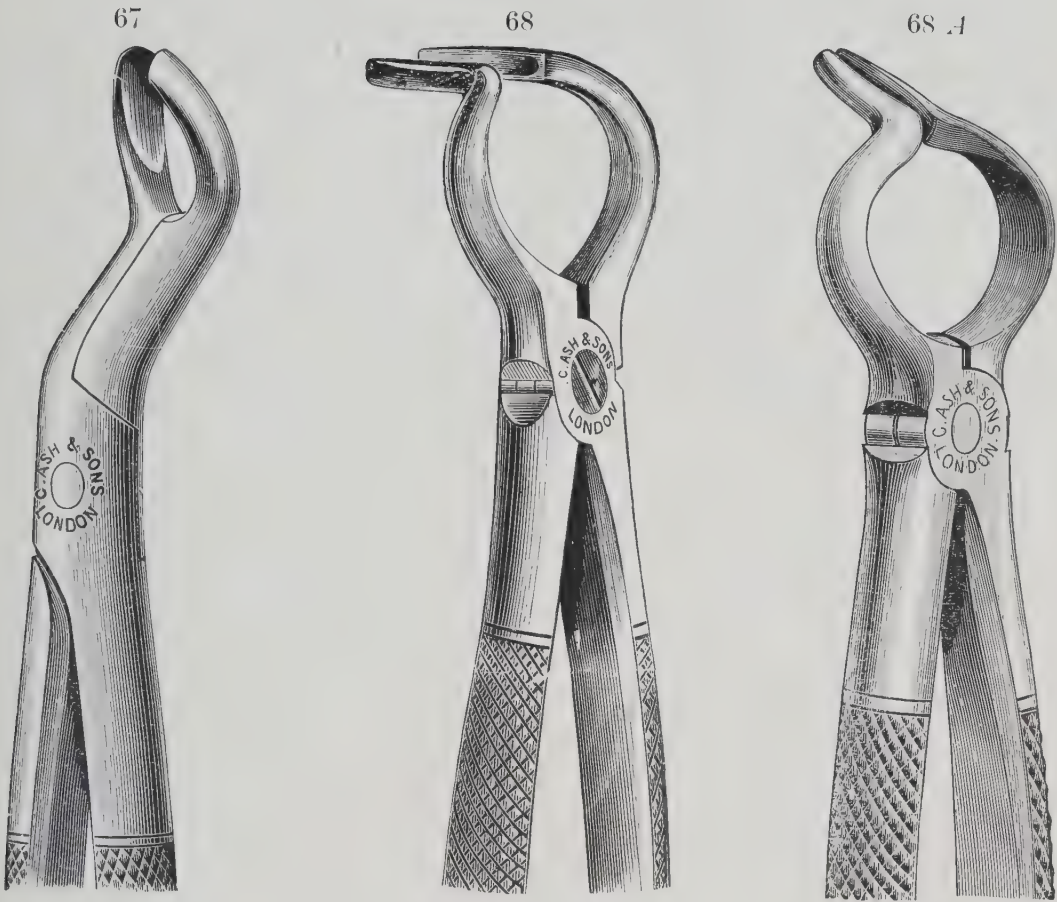


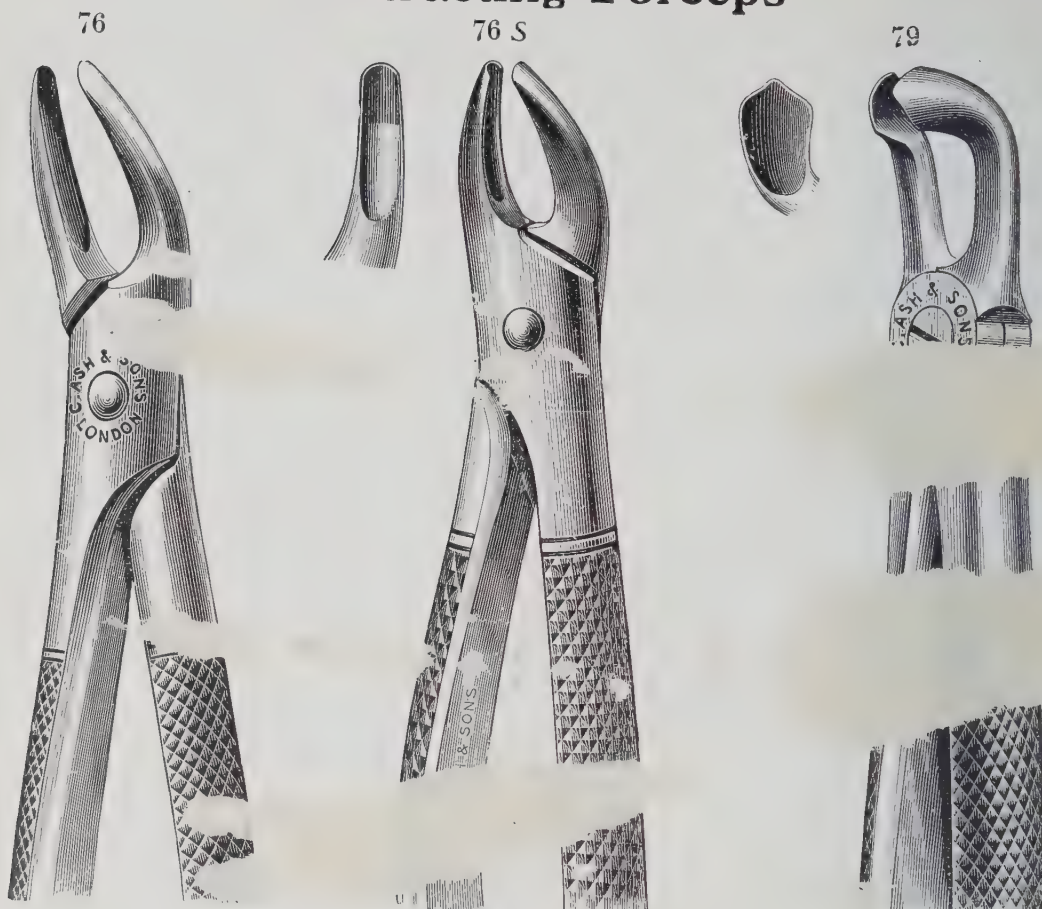
Fig 67. For Upper Wisdom Teeth

“ 68. For Lower Roots

“ 68 A, For Lower Roots

Each	-	-	-	-	\$2.50
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Extracting Forceps



79 (back view)

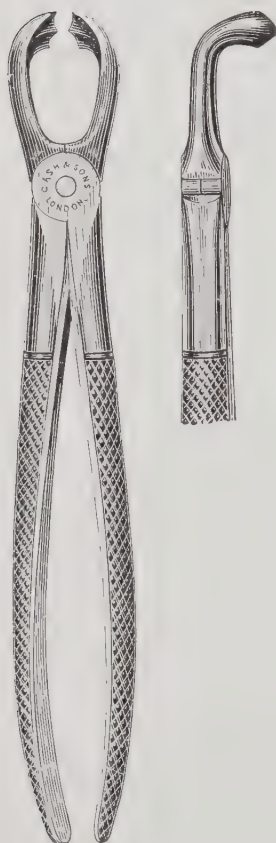


Fig. 76. For Upper Roots

" 76 S. For Upper Roots

" 79. For Lower Wisdom Teeth

Each	-	-	-	\$2.50
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Extracting Forceps



Fig. 107. For Upper Canines.

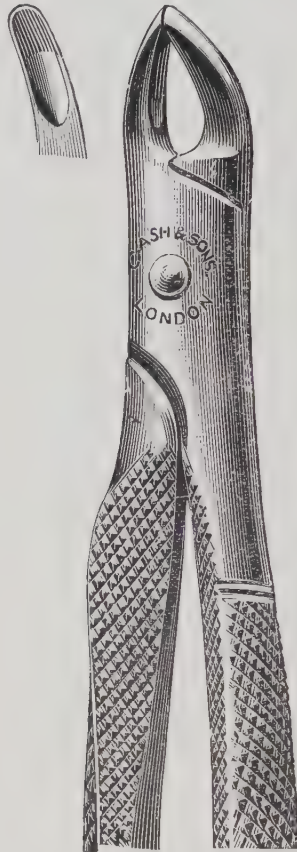
This instrument is made with short powerful beaks, one of which is slightly narrower than the other, as recommended in Tomes' Dental Surgery, where it is stated, on page 492 of the fourth edition, that: "A section through the neck of an incisor of the upper jaw will show that the anterior is larger, and forms part of a greater circle, than the posterior surface. Now, the end to be attained in the application of Forceps is to apply them over as large a surface as possible, so that the pressure may be diffused and the chance of fracturing the teeth by the pressure of the instrument avoided. To extract these teeth, therefore, the jaw to be applied to the posterior surface must have a smaller curve than that for the anterior."

Each, Nickel-plated - - \$2.50

Extracting Forceps

(Mr. E. Thorne's for Upper Roots)

110



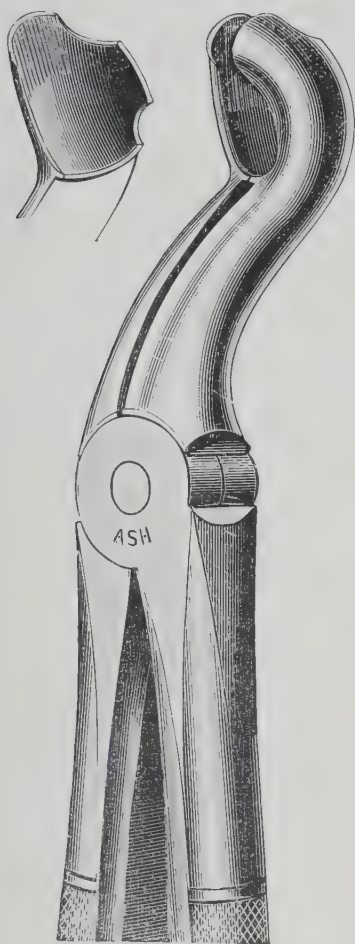
Mr. Thorne says: To those Operators who are accustomed to employ the short beaked Forceps now so popular and so extensively used, these Forceps will be found of great advantage, inasmuch as they can, on occasion, with practice, be used for extracting the roots of most teeth in the maxilla. Their use, however, is especially indicated in the extraction of upper molar roots, the bend near the beaks enabling the Operator to avoid the teeth anterior to the root to be extracted, while the bend in the handles enables him to avoid the lower lip and to prevent bruising it.

At the same time no power is lost by the introduction of these bends, owing to the beaks being parallel with the handles. This admits of the greatest possible power being transmitted to the root and of the utmost penetration being obtained.

Each, Nickel-plated - - \$3.00

Extracting Forceps

121



150 (With Box Joints)

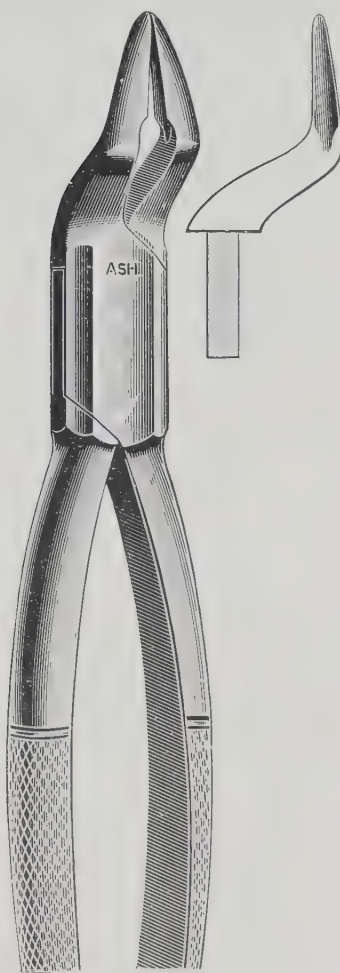


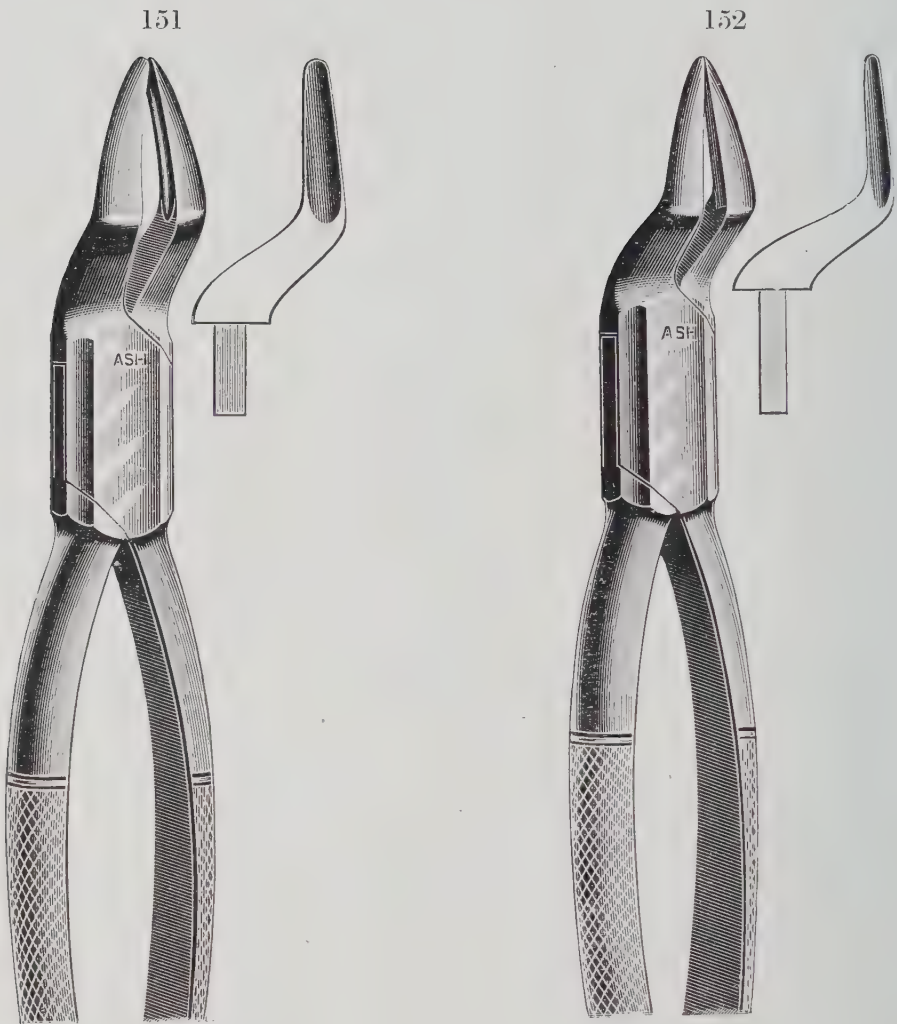
Fig. 121. Felsch's Upper Wisdom, similar in shape to our well-known Fig. 67, but with beaks so formed that they constitute a box around the tooth and prevent it slipping out of them.

Fig. 150. Alveolar, bayonet shape, small.

In Polished Steel, Nickel-plated, Figs. 121, 150
each \$2.50

Extracting Forceps

With Box Joints



(Hitherto known as Figs. 35 and 65, American pattern.)

Fig. 151. For Upper Roots, bayonet shape.

Fig. 152. Dr. Arrington's, bayonet shape, with very narrow beaks for extracting difficult Roots from the maxilla, also for extracting Roots of Front Teeth in the mandible.

In Polished Steel, Nickel-plated, Figs. 151, 152
each, \$2.50

Root Elevators

Full Size



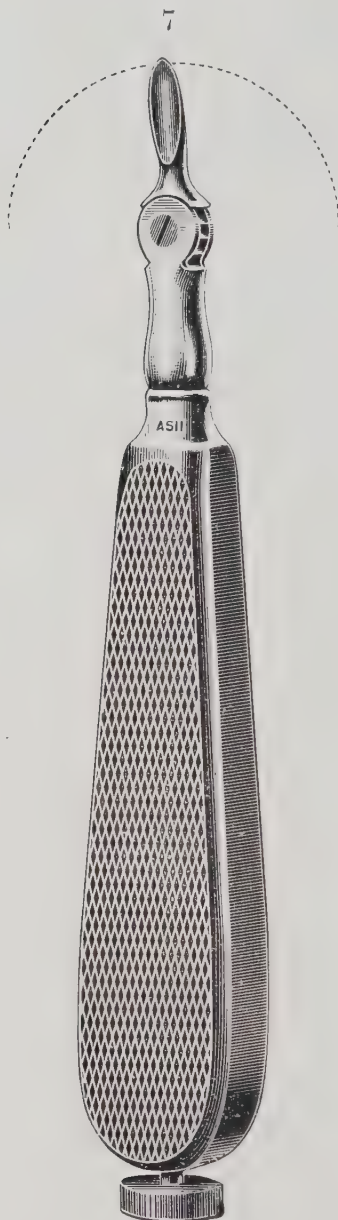
Elevators, Figs. 1, 2 and 3

In Ebony handles (Mr. Thomson's),
Nickel-plated each \$2.00

In Metal handles, Nickel-plated
each \$2.00

Root Elevators

(Fig. 7 is two-thirds natural size.)



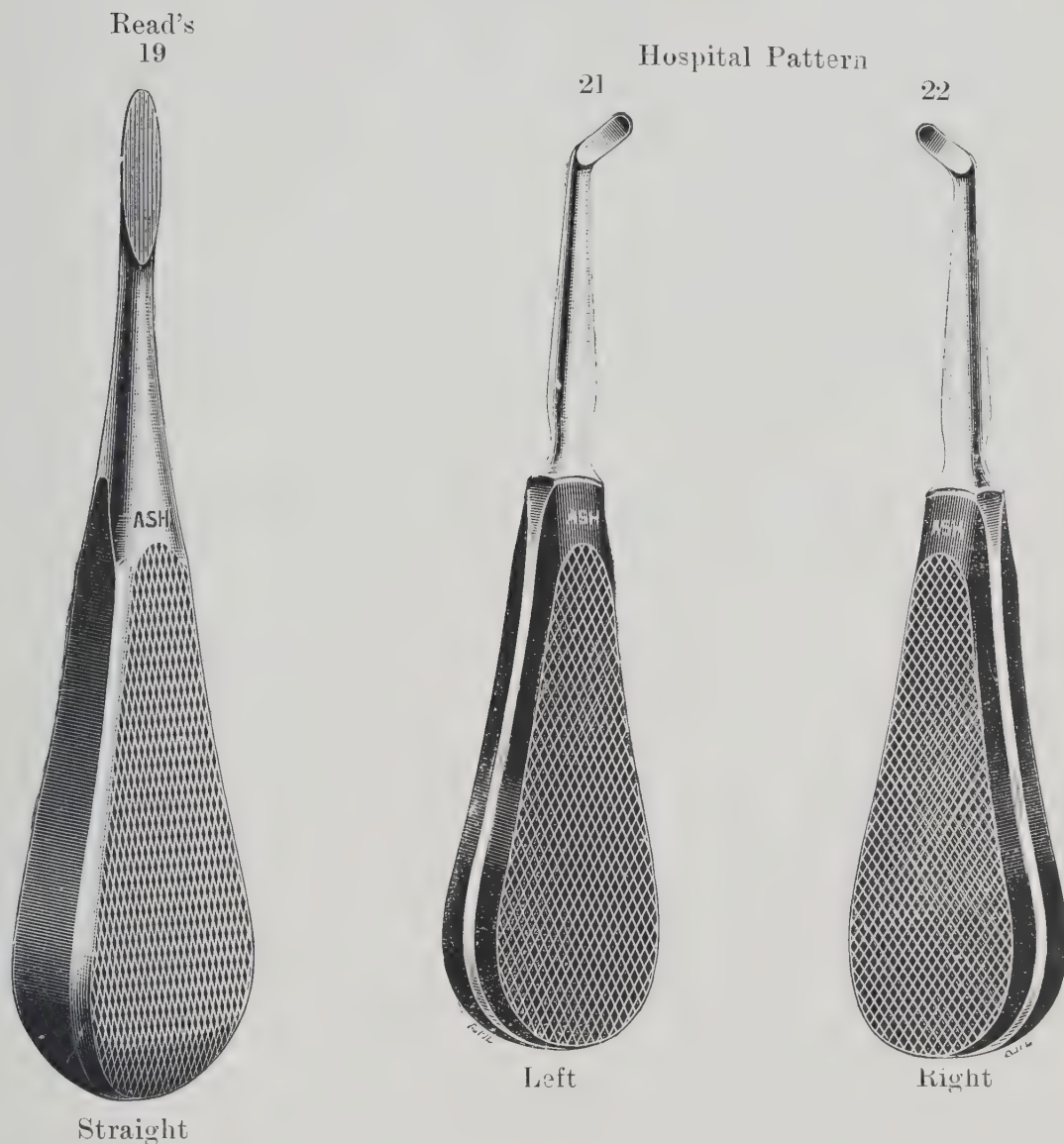
Elevator, Adjustable, in Ebony handle

-

\$2.25

Root Elevators

Three-fourths size



Hospital patterns with serrated blades, Read's with plain blades.

Fig. 19. Elevators, Read's pattern, in Ebony handles - each \$1.50

Elevators, Read's pattern, in Ebony handles, the same
size as Figs. 21 and 22 - - - - each \$1.50

Figs. 21 and 22. Elevators, Hospital pattern, in Ebony handles
each \$2.00

Any of the above can be had in Metal handles, Nickel-plated,
at the prices quoted for Ebony handles.

Symes—Paget Knife



With two Blades and Spring Stops, best make.

In White Metal handle - - - each \$2.00

Other Lancets made or obtained to order.



1

Lancets for Abscesses, Etc.

Figs 1 and 2. For opening abscesses, trimming
and smoothing filings, etc.

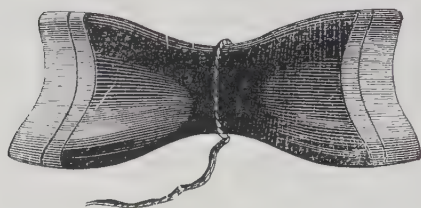
In Steel handles, Nickel-plated
each 30c.

Other Lancets made or obtained to order.



2

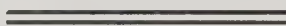
Ash's Simple Gag



Vulcanite with Soft Rubber Pads

Large, Medium, Small.

Each - - - - 40c.



Gum-Cutting Forceps

(Designed by MR. WOODHOUSE)



For removing gum from the masticating surfaces of partially erupted Wisdom Teeth. Before applying the Forceps, make an incision with a lancet along the anterior margin of the tooth: then insert the blade, and remove the gum by firmly closing the handles.

This instrument cannot be Nickel-plated without spoiling the cutting edges.

In Polished Steel - - \$2.50

Improved Plate Scissors

(MR. GIRDWOOD'S)

Crown and Collar Scissors

(DR. J. H. BEEBEE'S)



Specially adapted for the use of Crown and Bridge Workers.

Improved Plate Scissors (Mr. Girdwood's).—These Scissors are more easily handled than small shears, and allow of sharp curves and angles to be readily cut, and Mr. Girdwood finds them strong enough for crown gold, etc.

Fig. 7. Curved Scissors, Nickel-plated.....each \$1.25

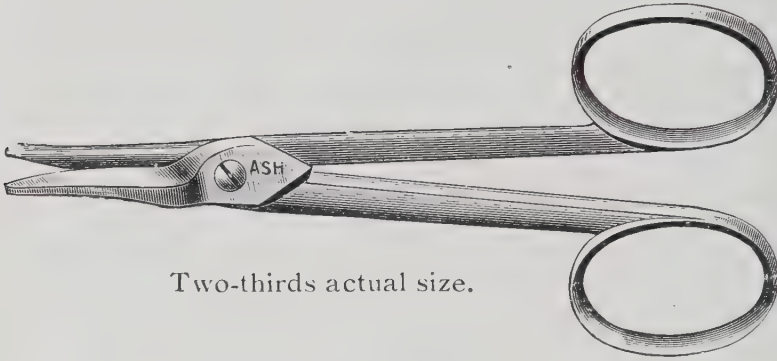
Fig. 8. Straight Scissors, Nickel-plated.....each .80

Crown and Collar Scissors (Dr. J. H. Beebee's).—Most useful for cutting and trimming gold collars and crowns.

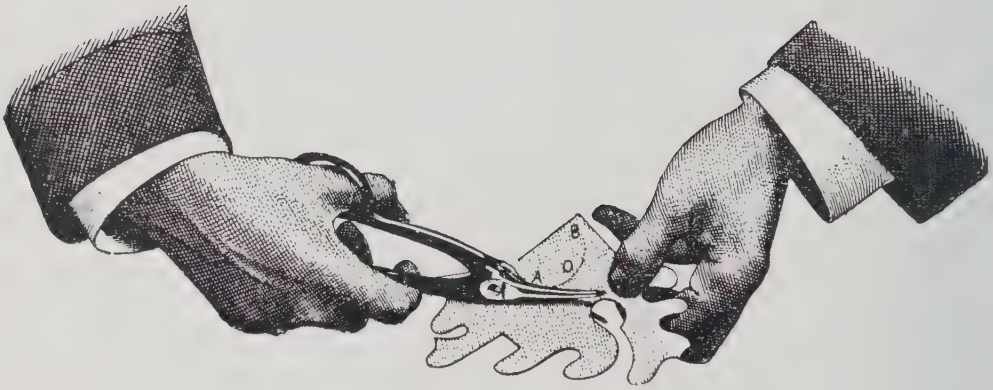
Fig. 9. Curved Scissors, Nickel-plated.....each \$1.10

Universal Plate Scissors

Fig. 10



Two-thirds actual size.



Greatly reduced size.

This greatly reduced size illustration gives a very good idea of the power which the operator possesses in cutting metal to any form with the Universal Scissors.

Fig. 10. Scissors, $4\frac{1}{2}$ in. long, Nickel-plated - \$1.60

PRACTISES FOR SALE

- FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350
- FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -
- FOR SALE—Dental Practice in Eastern Ontario Town. Good Outfit. Practice yields \$2,000 per annum. Low expense. One visiting Dentist only in same location. Population of Town, 2,500. Apply Ash & Sons - 250
- FOR SALE—Dental Practice. Cobourg. Apply Ash & Sons 500
- FOR SALE—Excellent Practice. Eastern part of Ontario on St. Lawrence River. Good Equipment. Moderate Price. Apply Ash & Sons.
- FOR SALE—Dental Practice. St. Thomas, Ont. Fine equipment. High-class Practice. Apply Ash & Sons.

We have a good opening for a reliable Mechanic to start in business for himself in Ontario city. Apply C. Ash & Sons.

SECOND-HAND GOODS

- I New Model Wilkerson Chair, A-1 condition - - - \$160
- I S.S.W. Pattern Chair, Leg Base - - - 30
- I Case Harvard Chair - - - 20
- Contents Toronto City Operating Room. New. Apply Ash & Sons.
- I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new - - - 60
- I Davis Gasometer, less Face Piece and Tubing, excellent condition - - - 18
- 2 Elgin Casting Machines with Attachments for plates, each 25
- I Wetherby Suction Machine (new style), in A-1 condition 25
- I Pelton Porcelain Furnace, A-1 condition - - - 25
- I Davis Gasometer
- I Mills Centrifugal Casting Outfit } - - - 25
- I Olivian Swager }
- I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler - - - 12
- I American Cabinet, No. 60, in Antwerp Oak. Practically new 60
- I Work Bench—Marble Top. Shop worn - - - 23
- I Electro Dental All Cord, Bracket Engine, 110 Volts, 60 Cycles alternating with hand pieces. Perfect condition - 80
- I Clark Regular Double Bowl Cuspidor. A-1 condition - 30
- I Ash Long Range Chair. A-1 condition - - - 125
- I Canadian Columbia Chair. Newly covered in Leather - 60

Compare These Two Bridges

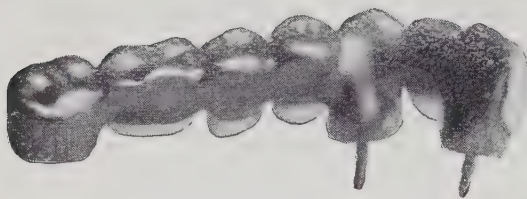


Fig. 1. A seven tooth bridge made with **Facings**

Figure 1, Facings

Cold cusps

Artificial restoration with unsightly gold cusps and backings

Weight of gold 9 pennyweight, 11 grains

Cost of Gold \$11.35

Not hygienic; presence of hypertrophy and hyperemia

Conventional cusps and faulty occlusion

Partial attachments of facings and grinding of facings necessary

Leverage concentrated on pins of facings

Repairing costly and laborious, usually involving renewal of entire bridge

Discoloration and damage in soldering; translucency spoiled by backings



Fig. 2. A seven tooth bridge made with **GosLee Teeth**

Figure 2, GosLee Teeth

Porcelain cusps

Natural and life like restoration, only porcelain visible

Weight of gold 6 pennyweight

Cost of Gold \$7.20

Perfect sanitation with smooth surface adjacent to gums

Anatomical cusps

GosLee Teeth are completely boxed by cast or swaged gold and cemented to post

No leverage; stresses are distributed through vertical post and gold box

Any individual tooth is replaced instantly

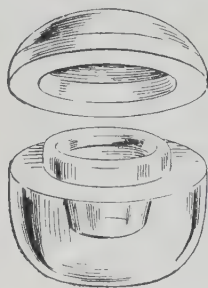
GosLee Teeth are set without heat or backings and retain their beautiful natural translucency and That Live Tooth Appearance

**THE CONCLUSION IS OBVIOUS
USE GosLee TEETH**

CONSOLIDATED  DENTAL MFG. CO.

NEW YORK CHICAGO CLEVELAND BOSTON DETROIT PHILADELPHIA

Ash's Ball Shaped Medicament Pot —WITH COVER—



For holding small quantities of medicines, pumice, etc. for individual or immediate use.

Supplied in following colours :—Flint, Red, Yellow, Light Blue, Dark Blue, Green, Topaz and Dark Green.

PRICE 25 CENTS EACH

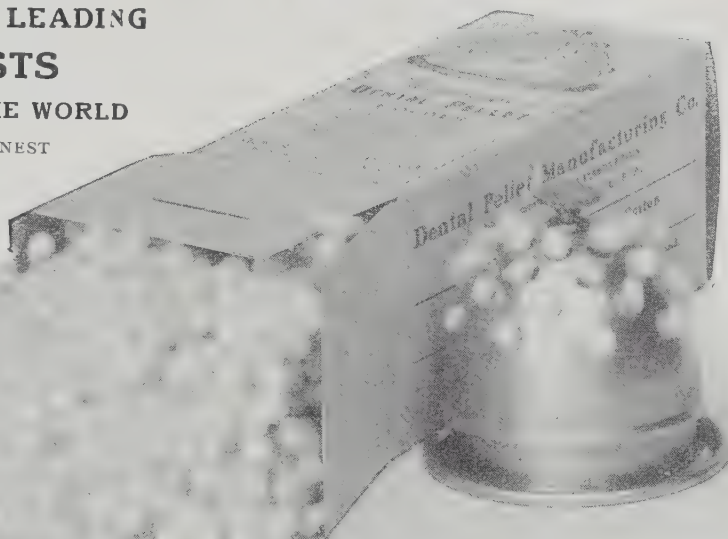
Richmond Dental Pellets

USED BY THE LEADING
DENTISTS

THROUGHOUT THE WORLD

MAN'G FROM THE FINEST
ABSORBENT COTTON

Price 25c.
per
Packet



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TORONTO



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A GAIN the "impossible" has been made possible, the "unattainable" attained. Recently one of the greatest Dentists of America, formerly the dean of a great dental college said: "I have lived to wit-

ness many wonderful things in my profession, but I did not expect to live to see a material as wonderful as DE TREY'S SYNTHETIC PORCELAIN."

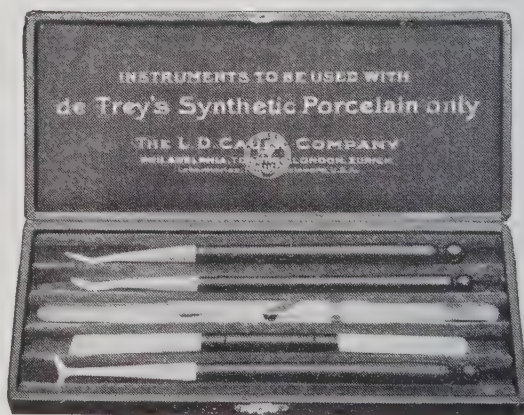
A leading dentist of Zurich told the writer of this advertisement recently that a few months ago he had examined several hundred synthetic fillings inserted four years ago and found them perfect both in appearance and endur-



ance in the last three and a half years. He had had several hundred synthetic fillings inserted three and a half years ago and had 100% perfect appearance and endur-

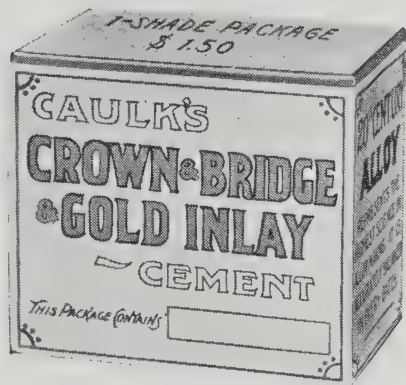
IT IS EASY TO MANIPULATE. Our Aseptic Shade Guide (\$1.50) is so ideal that it is practically necessary, for instead of approximating shades, it enables you to match them absolutely. **THIS SET OF INSTRUMENTS** in a case, where they should be kept regularly (\$6.50) will meet every requirement.

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PHILADELPHIA, Pa., U.S.A.
Laboratories, Milford, Del.



The Highest Type of Oxy-Phosphates

TESTED in the laboratory or tested in the mouth these cements show strength unequalled, and a degree of insolubility that approaches the absolute. They are submarine in nature, and after setting are impenetrable. So absolutely are these statements proved that we are willing to submit to any competitive test that is fair and that has meaning.



PETROID CEMENT IMPROVED is peculiarly adapted for fillings. There are eight shades, which are produced in the calcination.

CROWN & BRIDGE & GOLD INLAY CEMENT is especially adapted for setting Facings, Crowns, Bridges, Caps and Inlays. It is made in six shades.

Single Shade Package, \$1.50

Four Shade Package, 4.50

Full Equipment Package, containing 6 double portion liquids and powders (any combination) \$15.00.

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The Time Saver in Dentistry

Are You Using the Universal Filling Gold?

INTRODUCTORY PACKAGE

10 Pluggers	\$5.00
1 Handle	1.00
1-8 Oz. Gold	5.00
Morocco	
Plush Gold Case	1.00

Sold by All Dealers or
THE WILLIAMS GOLD REFINING COMPANY
 BUFFALO, NEW YORK

WHOLE OUTFIT \$6.00

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
 FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

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THE GUEDEL GAS APPARATUS

(Patented November 26th, 1912)



¶ With the Guedel Apparatus, analgesia or anesthesia is produced by mixing nitrous oxide gas with oxygen from the atmosphere in definite percentages. The exact percentage of air is plainly indicated on the dial, and is at all times under the control of the operative.

¶ The illustration shows self-administration by the patient. The design of the inhaler and aluminum handle is such that the patient is her own operator. Fear is thus removed and the risk of accidents reduced to the minimum. The patient knows that the inhaler may be removed at her own pleasure. Should she become unconscious, the inhaler removes itself. The necessity of an assistant is eliminated and the operator enabled to do better work.

¶ The flexible tubing of the Guedel Gas Outfit is metallic and nickel-plated, as are all other metal parts, and the entire apparatus including yoke, bag, valves and tubing may be taken apart in a few seconds and sterilized in boiling water. The bottom of the bag is provided with a screw cup, permitting sterilization of the inside.

¶ With the Guedel Apparatus, the operator may, with perfect safety, hold his patient in any state of analgesia that may be indicated for as many minutes or hours as desired.

¶ **BOOK WITH COURSE OF INSTRUCTION FREE.** A. E. Guedel, M.D., an anesthetist of national reputation, has written a treatise advocating air in preference to oxygen as a diluent to nitrous oxide gas in analgesia and short narcosis. This book will be sent you free upon request.

PRICES: Apparatus complete with clamp for cylinder and lug for attaching to any make of chair, less cylinder and gas, \$30.00. **ALL DEALERS.**

Made by LEE S. SMITH & SON COMPANY, PITTSBURG, PA.

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It **Buying** What?
Why Buying **IT** Be Wise

GET BUSY TRYING IT NOW



The "IT" referred to above is

Our Enamel Rubber Plate

The only evenly thin, properly made Rubber Plate with the **Natural Rugae**, ever placed on the market (at the price) which is but \$1.00 more than the regular clumsy weight :: :: ::

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Has proved most effective for patients' use in conjunction with the instrumentation and medication now practiced by progressive dentists in the treatment of Pyorrhea, is due to the fact that Pyorrhocide is a powerful antiseptic, deodorant and prophylactic. Its daily use by patients prevents tartar accumulation and tones the tissues of the mouth thus rendering them less liable to bacteria attacks.

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Pyorrhocide is not advertised to the public. It is prescribed by thousands of discriminating dentists and physicians whose investigations and experience prove it to be of the greatest value to patients in the **preservation of mouth health.**

“PYORRHOCIDE” and “DENTINOL” are the **only preparations** for pyorrhea treatment and prevention, **whose merits are demonstrated to the profession** at permanent free Clinics.

Our staff of specialists devote all their time to the subject of pyorrhea treatment and prevention and will be pleased to be of service to the profession through correspondence.

Write for our free book on—Pyorrhea, its Causes, Effects, Treatment and Prevention.

The Dentinol @ Pyorrhocide Co.

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That an upper and lower denture can be articulated properly without being touched with a grinding wheel by using

Justi True to Nature Teeth Anteriors and Posteriors

This means that the slightest detail has been worked out on a scientific basis in accordance with the ideas of the best authorities.

Can Supply in—

Plain Rubber—Anteriors and Posteriors platinum pins.

Plain Combination Sets — Anteriors platinum pins; Posteriors diatoric.

If your dealer cannot supply them order direct.

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Philadelphia

Chicago

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PAYS DIVIDENDS



The users of Clark Fountain Spittoons and Clark Gas Apparatus form in themselves a blue book of the Dental Profession. They comprise the Prosperous and Happy Class, because they recognize the financial returns of equipment that affords Hygiene and Sanitation to both them selves and patient and an apparatus that will shorten their hours and make their work painless, profitable and healthful in a strictly ethical sense.

A. C. CLARK & CO.

Grand Crossing,

Chicago, Ill.

Ask us about our
Exchange Proposition
on Spittoons. Drop us
a postal card to-day.

You should read our
interesting lectures on An-
algesia and Anaesthesia as
prepared by experts.

Mailed free to you on
request.

Are you satisfied that the Alloy fillings you are now putting in are the best that can be made? We are sure they are not unless you are using



Absolutely no contraction
One 20000 of an inch expansion
Greatest edge strength known

Ask Your Dealer

We Know How

Others May Copy.

OUR FIRST PRINCIPLE:

To Produce Metallurgical Supplies of
Highest Merit.

A SECONDARY BUSINESS CONSIDERATION:

A Secondary Class to Meet Competitive
Market Conditions in Cheapness.

Examples :

Our "Regular" Gold Solder, No. 18, is 16 karat quality
—contains 69 $\frac{1}{3}$ c of Pure Gold and sells at 85c. a dwt.

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article that by repeated analytical test in independent
laboratories, assays between 12 and 13 karat, contains
52 to 56 $\frac{1}{3}$ c of Pure Gold and sells at 80c. a dwt.

Your Choice:

69 $\frac{1}{3}$ c of Gold delicately
alloyed with purest of ele-
mental metals for 85c. a dwt.

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52c. to 56 $\frac{1}{3}$ c. of Gold with
extra Copper to maintain
color, lacking technical super-
vision, for 80c. a dwt.

Highest Quality Jealously Guarded.

The J.E. WILKINSON COMPANY, LIMITED.

The Better the Finish the Better the Work

¶ A crown or bridge with a fine finish is better than with a rough surface. The fine finish condenses the surface just enough to close the pores a little. It prevents the adhesion of deposits, resists better the attacks of chemicals contained in the food, is more welcome to the tissues, and is better in all ways.

¶ Such finish is now made easy for the dentist by the use of



Ney's Mirror Finished Seamless Gold Shells de Luxe

in which we give a mirror finish to the gold during the process of manufacture. This finish condenses the gold of the surface, as you would do it by hand burnishing. This finish may be carried throughout the operations of crown or bridge making.

¶ Crowns made with these shells are of unequalled beauty and hygienic value.

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	1 dwt.	20 dwt.	100 dwt.
22K Dark or Light, 30G	\$1.07	\$1.02	\$1.01
22K Dark or Light, 28, 29, 31, 32G	1.09	1.04	1.03

Paper labels discontinued.

Shells stamped on the inside.

TWENTY-EIGHT SIZES.

FIVE LENGTHS.

Ask your dealer to show them to you---then ask us.

THE J. M. NEY COMPANY, Hartford, Conn., U. S. A.

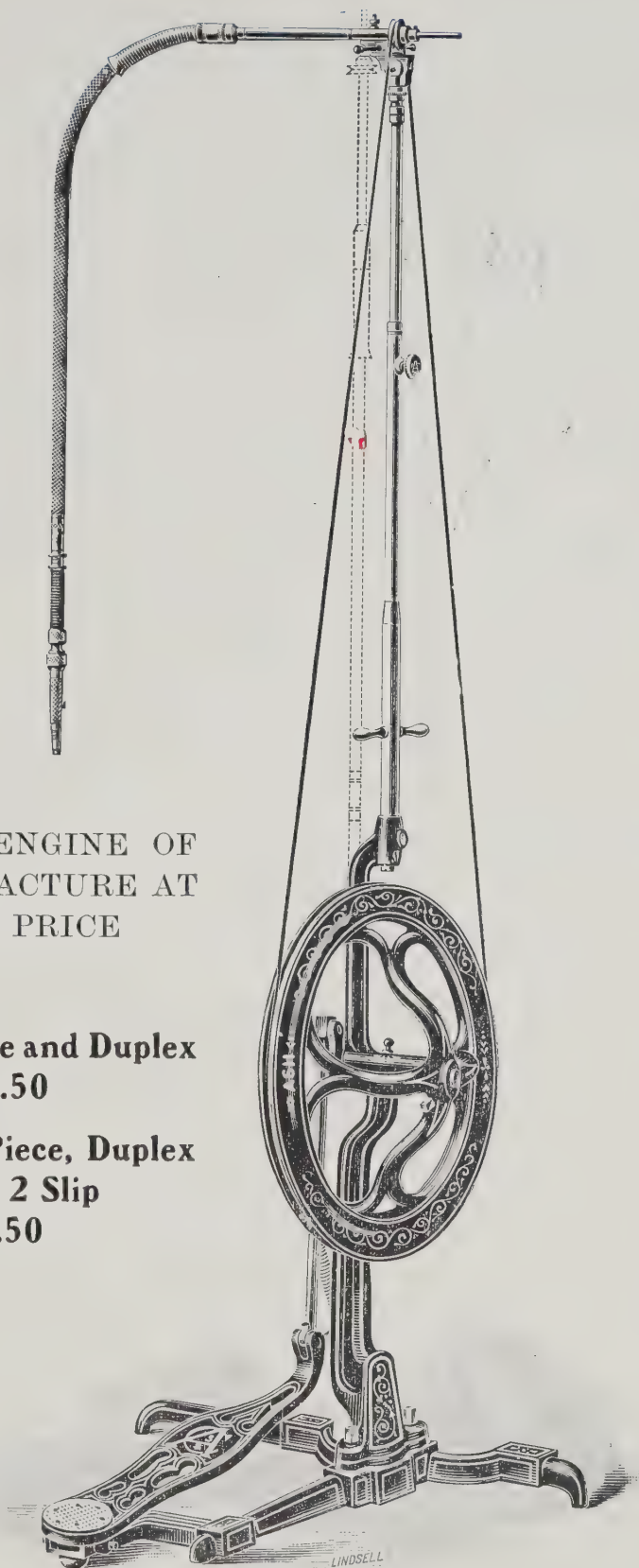
Ash's C Style Foot Engine



A GUARANTEED ENGINE OF
OUR OWN MANUFACTURE AT
A MODERATE PRICE

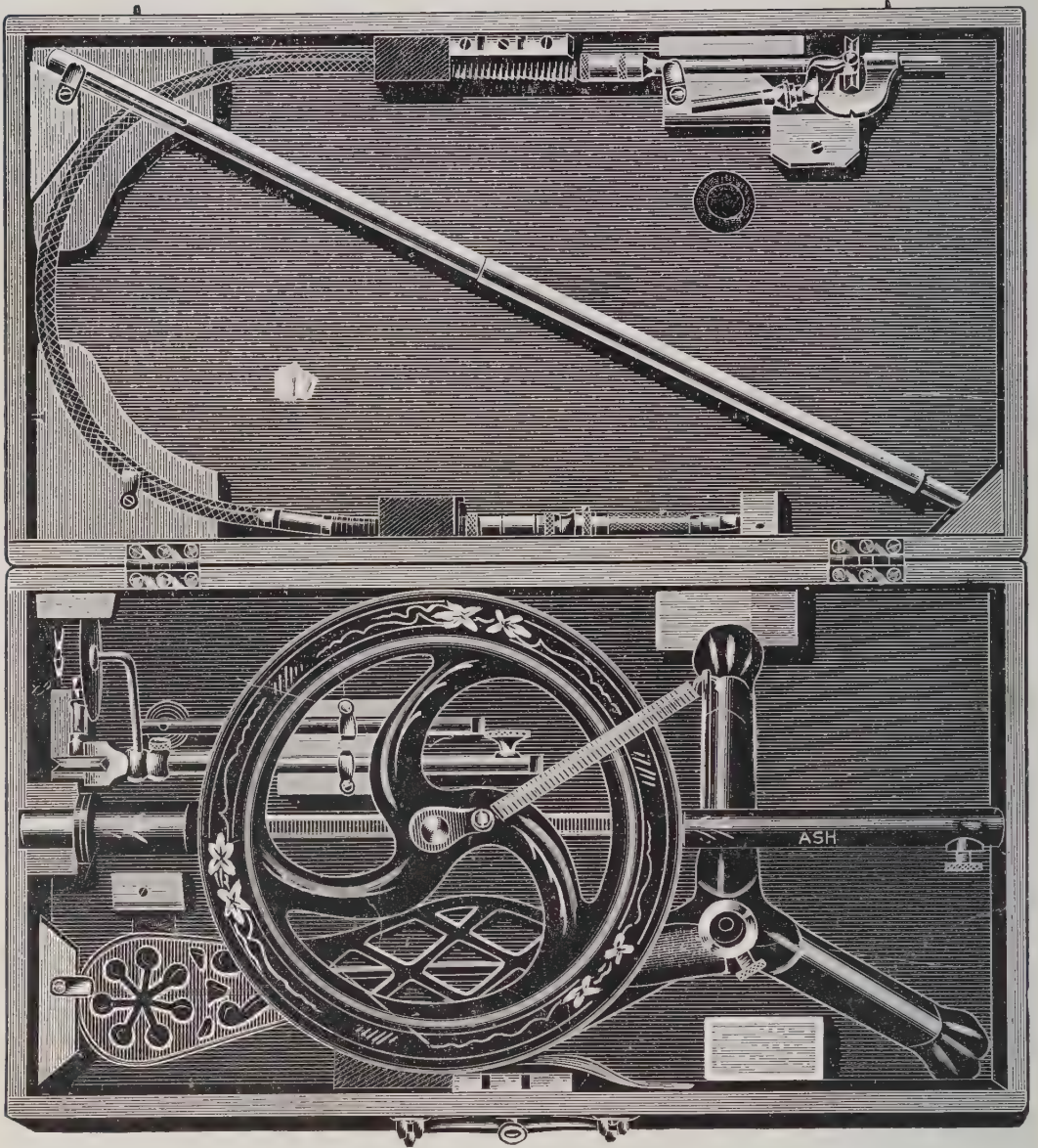
With No. 7 Hand Piece and Duplex
Spring, \$23.50

With No. 7 Hand Piece, Duplex
Spring and No. 2 Slip
Joint, \$28.50



Claudius Ash, Sons & Co., Ltd.

Ash's Travelling Engine



□ The illustration shows this ideal equipment boxed in its neat travelling case.

□ The box is neatly finished and equipped with servicable handle and lock.

□ This engine can be put together or dismounted in a minute or two without the aid of either screw driver or spanner.

□ The total weight of equipment including lathe attachment is 32 lbs.

□ The engine is a perfect running apparatus and fully guaranteed.

With No. 7 H.P. Duplex Spring and Slip Joint - \$28.50

With above equipment and Leather attachment 37.50

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ASH'S CANADIAN MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

CLAUDIUS ASH, SONS & CO. LIMITED.

CANADIAN BRANCH,

11-13 GRENVILLE ST. TORONTO, CANADA.

MAIN DEPOT

LONDON, W. ENGLAND.



..GOLD SCRAP..

WE have been many times requested by dentists in all parts of the Dominion, to establish our own plant for the refining of gold scrap. It has been time and again represented to us that the dentists wanted a reliable, general dental manufacturer to take up this work in order to give both security and prompt and efficient returns.

¶ We are pleased to state that we have now installed this plant and are prepared to receive your scraps and cuttings.

¶ If your sendings are valuable, forward them to us by prepaid express as there is no guarantee of safe delivery by the mails.

¶ In all cases please advise us by mail of the gross weight of your scraps, as we must verify the same immediately on receipt of the package. Also state whether you desire the returns in cash or 22k. plate.

CLAUDIUS ASH, SONS & CO.
LIMITED

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MAY, 1913

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“What Constitutes a State?”



Not high-raised battlements or
laboured mound,
Thick wall or moated gate;
Not cities proud with spires and
turrets crowned,
Not bays and broad-armed ports,
Where, laughing at the storm,
rich navies ride,
Not starred or spangled courts,
Where low-browed baseness wafts
perfume to pride.
No—men, high-minded men,
With powers as far above dull
brutes endued,
In forest, brake or den.
As beasts excel, cold rocks and
brambles rude;
Men, who their duties know,
But know their rights and know-
ing, dare maintain,
Prevent the long-armed blow,
And crush the tyrant while they
rent the chain:
“These constitute a State.”

—*Sir William Jones.*

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, MAY 1, 1913

No. 8

THE USES OF RADIUM IN DENTISTRY.

By H. Léger-Dorez.

It is known, since the publication of the works of Becquerel, Poincare, Curie, Dominici, Barcat and many others, what numerous uses are every day made of radium. These authors have taught us how this magic product has been brought into homely use, so as to serve the therapeutic needs of suffering humanity.

It is also known what marvellous help can be expected of this generous product, and from its emanations, which, attacking a misguided cell, in a fair way of becoming deformed or taking a wrong direction, puts it back in the right path while restoring it to the embryonic state, in readiness to resume the struggle for the preservation of its place in the system. Unfortunately, radium has a past; it is lightly spoken of; it frightens people.

The general public have been told by the press that radium burns. They have been told this in the same laconic manner as one might exclaim, "Fire, fire." Radium is dangerous; it causes gangrene of the tissues, as shown by the historic burns of Becquerel, etc.

The press often bestows benefits on the whole of humanity, but it often does quite the reverse, because its editors, for want of copy, badly informed, or not feeling the need of being better informed, write lightly, without science or profound knowledge of the subject of which they treat, and spread in profusion the error or exaggeration which, helped by mysticism and love of the marvellous, gives credit to theories that tend to retard science instead of aiding its development.

What has not been said about the Röntgen rays, about uranium, polonium, or about better-known products, cocaine, for instance?

Now radiographs are made by hundreds of thousands per month; cocaine is used in every form; polonium, uranium and radium disperse their emanations on many kilometres of the human skin. But this is done in the background of hospitals, under the protection of science, if I may thus express myself,

and into this background the representatives of the press do not go. They mention the disadvantages, but they rarely speak of the benefits, and the public are so uncritical as to be satisfied.

The X-rays will always burn. Radium will always cause scabs, and we have to struggle, not only with the product and its dearness, but also—and this is more difficult—with the fear of the patient, who prefers to perpetuate his disease rather than submit to the use of radium or Erlich's 606, because he has read, at the first appearance of these products, that radium burns or that the wonderful discovery of Erlich claimed some victims.

Messrs. Bouchard, P. Curie, V. Balthazar, since 1904, have studied with remarkable penetration the emanation from radium—that is the gas which is liberated from the radium at the moment of its radiation. This gas, which is capable of killing mice and guinea-pigs, when they are put under its prolonged influence, will, on the contrary, cure if it is used in limited therapeutic doses.

Pfeifer and Friedberger, Werner, Ashkinass and Gaspari, Hollmann, Denyoz, Wickham, Dominici and Barcat, M. and Mme. Fabre, have taught us that the emanation from radium retards the development of microbe cultivation. It reduces the virulence of staphylococcus, streptococcus, gonococcus and Koch's bacillus.

They have even made certain that the virus of rabies and gonococcus lose all virulence. Who knows it? Only certain privileged persons of pure science.

The public know that radium kills and burns, but the press has not told them that radium emanations destroy gonococcus and the virus of rabies under an emanation of forty-eight hours, and that the action of radium is still more interesting when therapeutic conditions are favorable for its application.

It is the emanation which acts, especially when radium is in a warm space and not confined, because it is its decomposition which gives birth to the most penetrating rays and this decomposition is hardly produced when the gas is already diffused in the outer atmosphere.

The emanation in therapeutic doses possesses analgesic and sedative properties which stimulate the general nutrition, and, as will be seen later on, the best part of these properties can be utilized in dentistry.

The salts of radium can be added to pomades, powders and lotions for local application, and although in infinitesimal doses, they impart sedative and healing properties to these mixtures.

Radiofied serums possess qualities which, according to Dominici and Faure Beaulieu, are appreciable; they can be injected in varied quantities, without harm, under the skin, and even into the organs of the body.

Perhaps only the commercial cost of radium—400,000 francs (£16,000) the gramme—has prevented trials being made with it, and the results of such trials are accordingly largely supposititious.

The use that can be made of radium, on account of its high price, is mostly reserved to radiation.

ACTION BY RADIATION.

I dwelt at length on the forms of radiation of radium in a preceding paper, which I had the pleasure of giving before the Cercle and the American Dental Club of Paris and I will therefore not repeat what I then said.

It is in the dry state and under different coverings that the radiations of radium can be employed in dentistry.

It was our chief, Danlos, who, in 1905, presented to the Medical Society of Hospitals the first apparatus with a covering of varnish due to the ingenuity of M. Danne.

This apparatus is of the simplest character; it is formed of a metal plate, which bears the radium salt covered with a coating of varnish, theoretically protected from the humidity of organic liquids.

In my previous paper on "Radium," which was taken from *Précis de Radiumthérapie* of my friend Barcat, I gave the names of the different apparatus used, also the names of the plates and tubes, and I mentioned the quantity of the salt—the salt of pure radium—how the surface was covered by the salt, etc., and I shall therefore not here again refer to these points.

Let me only say that the apparatus employed in dentistry is of reduced size, flat in shape, and that it develops an activity of 50,000 units per .04 cm. square. It can be used in the mouth, on the palate and on the lips in order to aid, by its application, in the curing, amelioration and healing of the different affections which I shall mention to you; the observations gathered since our first experiments in collaboration with my friend Dr. Barcat.

In medical therapeutics, radium helps to cure malignant and benign tumors, warts, growths, papillomata, adenoids, etc. In all these complaints the action of dispersion by radiation is clinically shown.

In dental surgery, the radiation, more or less prolonged, acts in a particularly sure manner in the treatment of pulpitis following fillings, caries of the neck of the tooth, the sensitiveness of which in grinding it reduces almost to nothing, and traumatic and septicaemic congestion of the gums. One application allows of the endurance of a denture which presses on the alveolar ridges. Epulis and benign tumors are beneficially influenced by the radiation of radium. In short—and this is the greatest advantage of the use of radium—by its employment incipient

pyorrhoea is radically cured, while in long-standing pyorrhoea the mucous membranes completely recover their health and fitness, preserving as inert bodies loose teeth with atrophied or missing ligament which appears to have no further connection with the surrounding alveoli.

The cleaning of hypersensitive mouths is rendered possible by one application of half-an-hour; it is possible to place the instrument quite far down under the gums in search of tartar or pus or the accumulation of crystals in advanced pyorrhoea.

I am going to place before you a long series of observations collected by Dr. Barcat on the patients that I have sent to him.

All these patients have been treated with apparatus covered with salts composed of 1 centigramme of sulphate of pure radium mixed with 3 centigrammes of sulphate of barium and spread over 5 sq. cm. of surface. Covered with three sheaths of rubber, to exclude humidity, they give an interior bodily radiation in rays B and Y of from 20,000 to 30,000 units.

The X-rays are concealed by the shields.

These plates, applied either on the lingual surface or the vestibular surface, would remain nearly half-an-hour over the affected zone. Each application, or each zone covered by the crossing fires of the radiation, should be put in repose. The real effects are only felt in from twelve to fifteen days after the application.

Madame B——, 51 years. Mouth badly cared for, teeth asymmetrical, lengthened, loose; advanced pyorrhic septicaemic state; rabbit jaw. After a careful cleaning, the patient was sent to Barcat. May 30th, first application of half-an-hour; the radium plate was turned about on all sides of the gums. June 13th. The general condition was greatly modified; the gums looked healthy. The very loose teeth were still loose, but the gums were no longer spongy, and their aspect was reassuring. The slightly loose teeth became firm. The patient ate well, which she had not been able to do for a long time past. June 14th. Second application, one-half hour. June 24th. Saw the patient again; she was well, and did not ask for further attention.

Madame L——, five children, four living, 35 years of age, fair, and of good appearance, received a bump thirteen years ago from the head of one of her children which loosened her two lower central incisors. The dead nerves were extracted, and the canals filled with thymoline, paraffin and gutta-percha, two years after the knock. 1912. Dental pyorrhoea alveolaris localized in the four lower incisors. June 20th. Labial application of radium (quarter of pure) for half-an-hour. June 21st. Lingual application of radium (quarter of pure) for half-an-hour. June 26th. Again saw the patient. The pyorrhoea which was spread was localized only on the lower left front tooth. The whole trouble

was in a fair way of being cured. July 11th. The patient seen again; quite cured.

M. C. P——, Brazilian. July 24th, 1912. One application of half-an-hour on lower left incisor and canine, external surface; one application of half-an-hour on internal surface. July 25th. Upper jaw, one application of a quarter of an hour, external surface; one application of a quarter of an hour, internal surface. These applications were made with an apparatus of from 20,000 to 30,000 units, the X-rays being excluded by rubber sheaths. January, 1913. Saw the patient again, whose teeth did not show the least trace of pyorrhoea.

Dr. Am. P——, Brazilian, 54 years. Seen July 24th, 1912. July 25th. Application on six teeth—four uppers, two lowers—attacked with pyorrhoea. September 6th. The patient, a doctor, said that certain teeth were less shaky. He ate better. General improvement very marked; no longer wished to have the teeth extracted, which he hoped to keep for a long time yet.

M. H. M——. Pyorrhoea general on the four incisors and lower canine, right side, without any preliminary cleaning. First application, June 10th. Seen again June 11th and 12th. The pyorrhoea had completely disappeared on the four incisors, the zone of which had again become healthy. All the inflammation seemed localized on the canine, which was more affected than the others. The gum was rarefied to the level of the neck of the tooth, and showed tartar and pus, which we removed. Radium was applied for 30 minutes to the level of the neck of the tooth which was exposed by the caries of the first and second lower left molars. These teeth showed a much-reduced sensitiveness in the cleaning, and were stopped on June 12th, although on the 10th they could not be touched even after a prolonged application of an adrenalin-cocaine dressing. On June 18th, application was made to the level of the three teeth remaining in the upper jaw; loose. Seen again June 29th; general appearance was good. As to the lower jaw, a little pyorrhoea still persisted on June 18th to the level of the lower right canine only; the rest of the jaw was in very good condition. Not seen again.

M. G——, 56 years. Small upper incisor loose from pyorrhoea. Large incisors inclined to loosen. These two large incisors were attacked by commencement of arthritis, non-suppurating. June 17th, 1912. First application of half-an-hour, no longer. Result: Cure after the twenty-ninth day of application.

Mlle. M——, 22 years. Commencement of pyorrhoea with loosening of the upper left lateral. June 28th, 1912. One application of half-an-hour. Patient not seen again, because left for the south. A letter confirmed arrest of the affection.

Mme. J——, 39 years. June 20th. Application. The lower right central was loose. June 25th. Half-an-hour on the lower.

After this second application the patient rested three weeks. Seen again July 10th. Complete cure.

Mme. B——, 58 years. June 26th. Lower central and left canine, one-half hour in front. July 9th. The same in front and at the back. The canine and central were a little loose (patient reported that they were now firm). Seen again in September; the patient did not complain—seemed cured.

M. M——, and brother, sons of a bailiff of the Chamber of Deputies; both had rather acute pulpitis caused by filling in first right under premolar. July 3rd, 1912. The pain, which had become intolerable, ceased on the two young men after an application of radium for half-an-hour, and did not recommence. Under a light the teeth appear to have kept their vitality.

We could go on indefinitely relating many more cases, but they are all so alike that they would become wearisome.

We do not believe that the radiation method, as used in all these cases, would have any influence on highly diseased tissue, but applied to such cases as I have quoted, when the organ is very carefully disinfected, radium, if it were available, would become a powerful aid in arresting inflammation.

An experiment lately made will give you an idea of the limit of the power of radium in these cases.

At the same time as I treated M. B——, an aviator, I attended to the same tooth of a lady 36 years of age—the right upper premolar in both cases. My two clients showed the same inflammatory phenomena, the painful forerunner of odontalgia. In one case—the more easily dealt with—I applied radium for an hour; the other was only treated by the mechanical-therapeutic method.

There was no odontalgia in the radium-treated case. It was cured in four days, and the root served as a support for a bridge with three teeth; the other end of the bridge was supported by a split ring on the molar.

In the other case—that of the aviator—odontalgia supervened; the patient suffered a great deal, and was not completely cured until after six weeks of treatment.

A SUCCESSFUL DENTAL HYGIENE COMPETITION FOR CHILDREN.

One of the greatest problems of dentists and dental societies is how to awaken public interest in the care of the teeth, and thus induce the public to take advantage of the greatly improved methods of present-day dental treatment. It is quite certain that no one outside the dental profession will do this important work for the dentists and dental societies, and they must therefore undertake this fruitful labor themselves. The following short account of a very successful effort in this direction may interest those dentists and dental societies who have not already availed themselves of this means of propaganda.

Previous to the Dental Congress held in December, 1912, at Havana, the Congress Committee made arrangements for all the scholars of the municipal schools to be brought to a central hall on one of the Congress days by their teachers. The scholars were also previously told that prizes would be awarded to those who presented themselves with the cleanest and best-kept teeth. Nearly three thousand lively and enthusiastic children in holiday attire attended, and the proceedings were further enlivened by music performed by a local orphanage band, the members of which also took part in the competition. The children, marshalled in about twelve single files by their teachers, had their mouths examined by about twelve inspector dentists chosen from the Congress members, and in all cases where dental hygiene had been sufficiently observed a colored card was given, to be exchanged later for a prize. To those children who showed the greatest merit white cards were given, to those of lesser merit yellow cards, and to those of the third degree of merit green cards, by the dentist inspectors. After all cases had been inspected, the cards which had been retained by the victorious scholars were exchanged for prizes of various values, corresponding to the various colors of the cards; and this plan worked very rapidly and well. Further, special additional prizes were given by members of the committee and friends, as well as a child's wash-bowl outfit presented by the chief of the city sanitary department, who was present and gave a short appropriate discourse to the children, as did also the president of the Dental Congress.

Finally, eight thousand copies of a circular composed by a Congress member to explain dental hygiene in simple language were distributed, and the children left this great dental demonstration more impressed probably than would have been possible by means of numerous ordinary dental lectures.

The whole proceedings were eminently successful, aroused considerable public interest and the local press comments were lengthy and very favorable.

ERRONEOUS BELIEFS ABOUT EGYPTIAN DENTISTRY.

The statement has long been current that the Egyptians were able to make false teeth, or to stop teeth with gold. There is, however, no evidence of this in any of the mummies which have been examined.

They appear to have paid but little attention to the teeth during life, although prescriptions for toothache and face-ache are found in the Ehro and other medical papyri. Most of the royal and priestly mummies that have been unrolled and examined show that where the teeth remain they are fairly good, although the higher classes lived on soft food.

Such teeth are not half worn down like the teeth of our ancestors as exhibited in the skulls from ancient fields of battle. Nothing dental is more striking than the strength, evenness, completeness and perfect soundness of the teeth, albeit the squareness of the jowls of the Picts and Britons would shock our present-day sense of beauty.

The nearest approach to dentistry among the Egyptians is found in the period of the twenty-first dynasty, about B.C. 900. The mummies of that time show that where teeth were missing they were sometimes replaced during the embalming process by similar teeth taken from other bodies and cemented in with bitumen or with a paste made of wax scented with balsam.

In Ptolemaic times, when mummies were very luxuriously prepared for burial, the teeth were often covered with a thin plate of gold, and the small portions which remain have given rise to the idea that the teeth had been stopped with gold.

The only example of dental work is found in a mummy of a priestess of Graeco-Roman time, about the second century A.D., in the museum at Vienna, where a loose tooth is held in place by a thin gold wire twisted round the sound tooth next to it.

The earliest use of false teeth, made of hard wood, is attributed to Aaron, the Hellenic Jewish physician, of Alexandria, who made teeth of acacia wood and secured them in position with gold or silver wire. His date of existence is the fifth century A.D.

ASH'S DENTAL RUBBERS

UNAPPROACHED FOR

Excellence, Purity, Strength, Elasticity, and Density

To mark the genuineness of our Rubbers, the face of every box and envelope which we supply bears this signature and monogram—

The image shows a cursive signature "J. Ash & Co." followed by a monogram consisting of the letters "A" and "S" intertwined with an ampersand "&" in the center.

and one of the pieces of cloth in which each sheet of Rubber is packed bears this signature—

A smaller version of the cursive signature "J. Ash & Co." shown in the previous block.

in addition to the name of the Rubber. Always ask for ASH'S when ordering our Dental Rubbers.

TRUE CHEAPNESS.

In choosing dental rubbers, **price** should not be taken as the main guide, because some rubbers which are considered cheap are really dear when they are compared with the more expensive rubbers, many of which yield from 30 per cent. to 40 per cent. more plates to the pound than some of the cheap rubbers.

If **true cheapness** is the aim of a buyer he should not fail to take **quantity** into account, since it counts for much, quite apart from **quality**.

We offer both quantity and quality.

We guarantee full weight in every box or envelope of Rubber of our manufacture, exclusive of the tracing cloth in which it is packed.

Ash's Leading Dental Rubbers

Pinks for Coating:

Gum Pink, Light				} \$6.00 per lb.
“ “ Medium	....	....	....	
No. 1 X	....	....	....	

Highest Grade Rubber for Base:

Dark Elastic				\$3.50 per lb.
--------------	------	------	------	----------------

Best Cheapest Rubbers for Base:

Orange				} \$3.00 per lb.
Red	....	....	....	
English Base	....	....	....	

Special Rubbers:

Soft Pink for Tender Gums,
 Pink and Brown Repairing,
 Pink and Brown Weighted,
 White,
 Combination Whalebone 1 and Black.

Full list of all the Rubbers we make sent post free on application.

A discount of **10** per cent. is allowed when 5 lbs. of our Rubbers are purchased at one time. This quantity may consist of several kinds of ours, but it does not apply to Rubbers of any other manufacture.

In ordering our Dental Rubbers be sure to ask for ASH S.

New Prices for Stent's Impression Compound

Per Box	.45
6 Boxes	2.50
12 Boxes	4.50
20 Boxes	7.20

This Compound is the most reliable on the market, and has stood the test of time. If you have not used it, send us a request postal for a sample.

Claudius Ash, Sons & Co., Limited

Ash's Imperial Golds

CYLINDERS

SIZES $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, ASSORTED

$\frac{1}{8}$ OZ.	....	....	....	....	\$ 3.50
$\frac{1}{2}$ OZ.	....	....	....	....	13.50

FOIL

CORRUGATED AND COHESIVE, No. 4

$\frac{1}{8}$ OZ.	....	....	....	....	\$ 3.50
$\frac{1}{2}$ OZ.	.	....	....	....	13.50

Ash's Gold Solders

Unsurpassed in colour and working qualities.

A leading Toronto Dentist says:—"The best Solder I have ever used."

14 kt.....	\$.65 dwt.
16 kt.	.75 "
18 kt.	.85 "
20 kt.	.95 "
22 kt.	1.05 "

In quantities of 1 oz. ordered at one time, Cash with order, 5c. per dwt. is deducted.

An ounce Gold order may be made up of various kinds of Plate and Solder.

Ash's Dental Alloy Wire

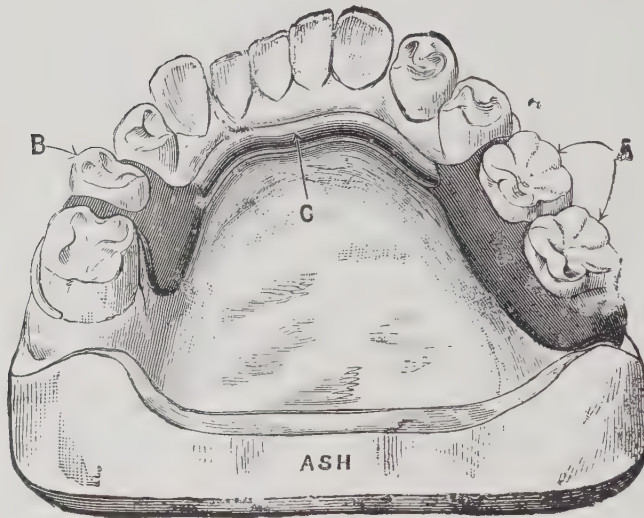
Square and Round, - \$1.12½ dwt.

Sold only in lengths of 2 dwts. each

This wire is very rigid, being composed of Platinum and Silver and is high fusing enough to admit of pure gold being soldered to it.

Ash's Oval Gold Cased Wire

For Bar Lowers



Bar Lower Dentures have come into universal demand. Note some of their advantages.

No tendency to push teeth outwards.

Greater cleanliness.

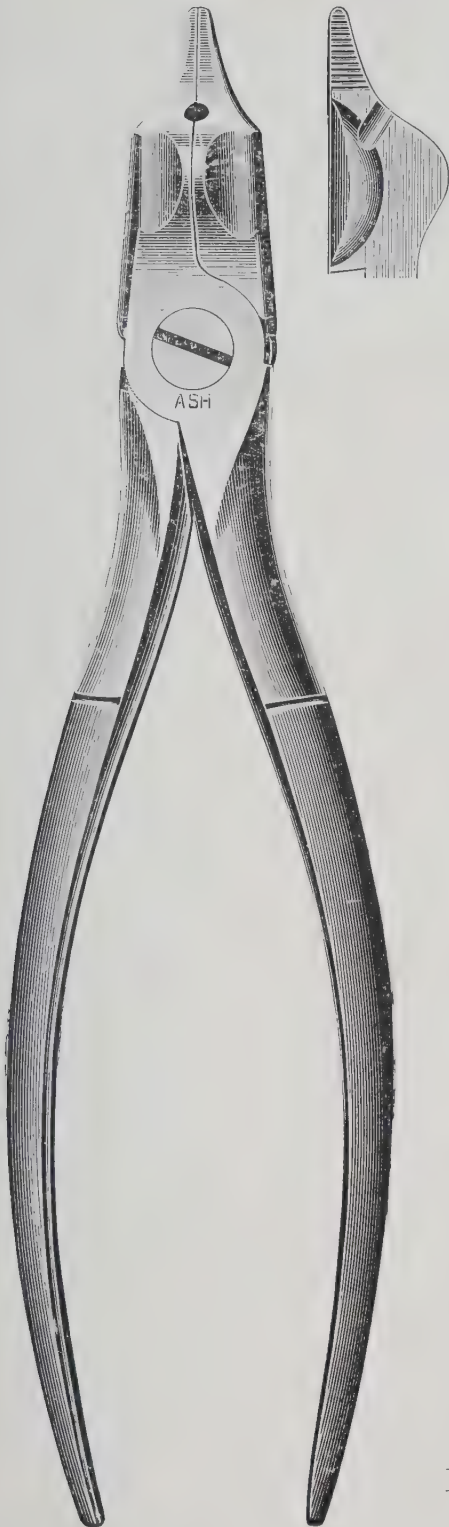
Less bulk.

Greater rigidity.

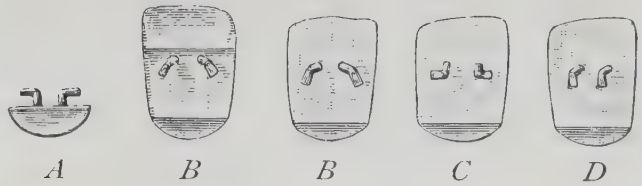
Per dwt.....40 Cents

Claudius Ash, Sons & Co., Limited

Ash's Pin-Roughing and Bending Pliers



Full size.



This is the most useful tool ever devised for cutting, roughening, and bending the pins of flat and vulcanite teeth.

To obtain the best results the pins should be bent as nearly as possible at right angles—see Fig. *A*—and in such a direction that they will grasp the vulcanite in the thickest part. In the several illustrations given above, Fig. *B* shows the most usual bend.

Pliers, as illustrated, Nickel-plated - \$1.50

Ash's Clayite



A large tin of the most satisfactory Moulding Compound for 35 Cents.

Its sale is world-wide and the satisfaction is complete.

SEND US A MAIL ORDER.

Hampel's Amalgam Carrier

This is a most useful instrument for carrying Amalgam to and discharging it in the cavity.

To take up the Amalgam it is only necessary to press the tubular end of the carrier into it a few times until the tube is filled.

The Amalgam is discharged by taking part *B* between the first and second fingers and pressing with the thumb on the end.

Price - - \$1.40



Ash's Crescent Contouring Pliers



4 $\frac{3}{4}$ in.

Crescent Contour Plier - \$1.25



Ash's Rubber Dam Punch

This punch has a circular plate containing four holes of different sizes.

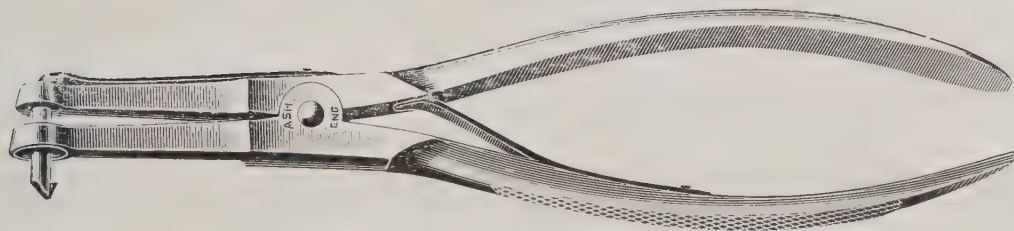
The punching pin *A* slides into socket *B* in a straight line when pressure is applied, and thus cuts equally all round the edge of the holes.

There is a small spring on the pin, inside the socket, which opens the handles when the pressure is released.

The Rubber Dam can be laid in the space beneath the plate and pin without danger of being caught or torn in the joint of handles.

Price - - - \$3.75

Ash's Crown Slitter



Half Natural Size.

With this Crown Slitter a metal band can be divided so neatly as to admit of the edges being brought together again and soldered, if the crown is to be replaced after needful treatment of root has been accomplished. The Cutter can be set in four different positions.

Price - - - \$3.50

Ash's Nerve Canal Pliers

Straight and Curved

For Removing Broken Drills from Root Canals



In preparing root canals for filling it sometimes happens that a drill is broken, and the question then arises how the piece left in the root can best be extracted.

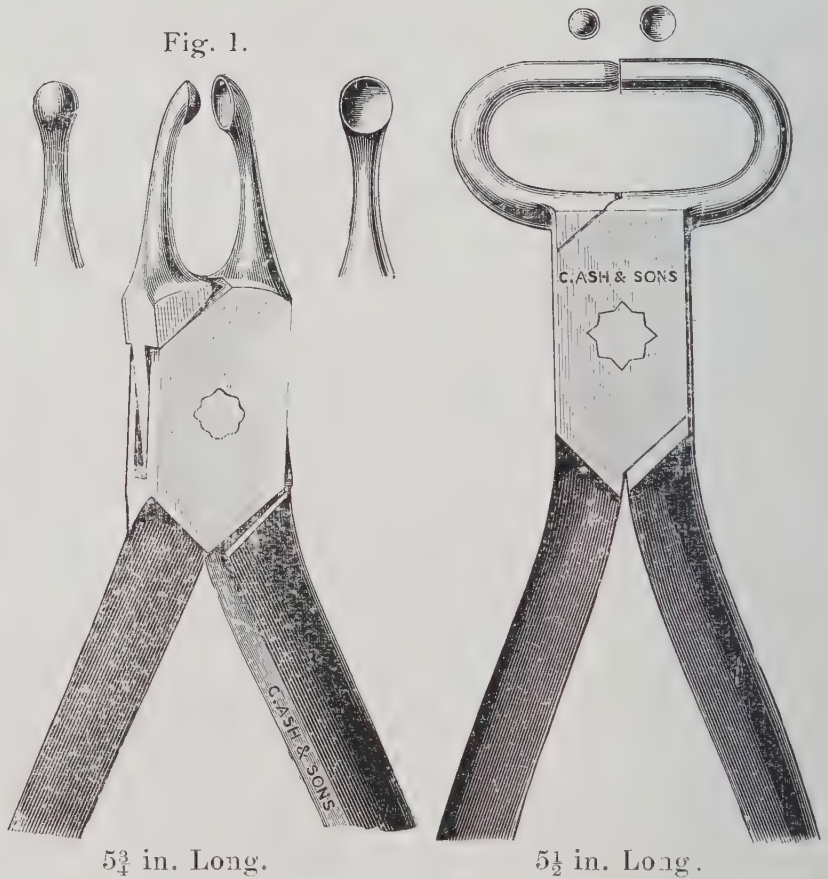
The points of these Pliers are fine enough to enter the root canal and to grasp the thin stem of the broken point that is lodged within it.

Price Straight or Curved, \$1.35

Patrick's Contouring Pliers

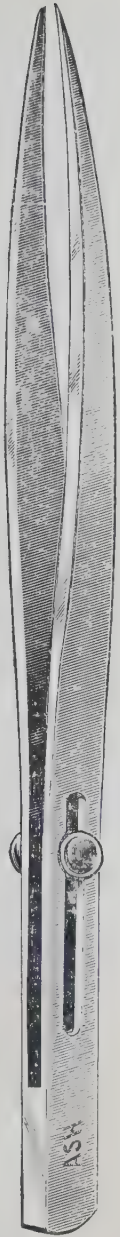
Fig. 2.

Fig. 1.



These Pliers are too well known to need an elaborate description. Pattern No. 2 finds the most favour. It should find a place in every laboratory.

Price either pattern - - \$1.90



Ash's Fine Locking Tweezers

These Tweezers are very accurately made with fine, even biting beaks that afford you perfect satisfaction.

Price each - - 30 Cents

Ash's Vulcanite Broach Holder

This is a neat, well balanced instrument that enables you to obtain a better and more delicate feel to your broach.

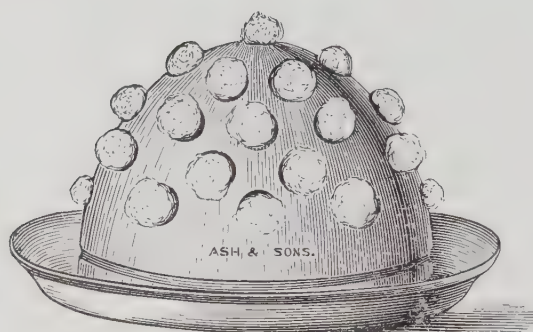
It is accurately made, gripping the broach perfectly with a proper clamp.

Unlike the ordinary holder it is an ornament to your table.



Price - - 30 Cents

Cuttriss Cotton Pellet Holder



The difficulty of picking up one pellet at a time with the tweezers, owing to the lightness and adherent nature of the cotton, is entirely overcome by the use of this holder.

A loose dome with a spring and screw pillar is fitted inside the outer dome so that the pellets are kept close to the holes, consequently the last pellet is as easily taken hold of as the first.

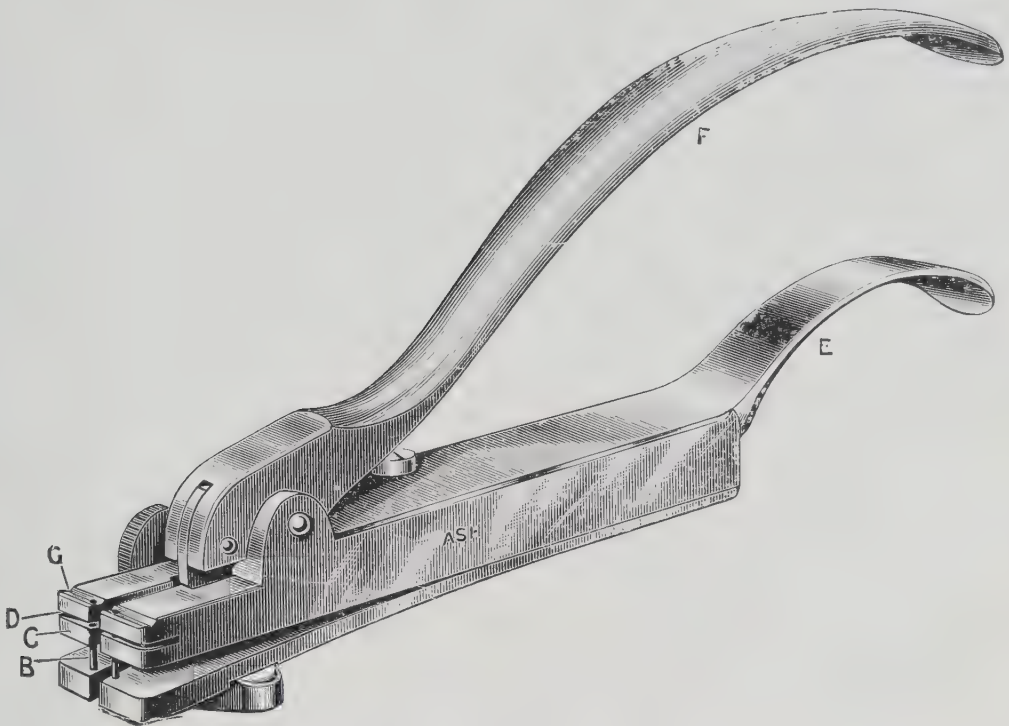
The holder is a well-made solid affair much different from many of the pellet holders offered for sale.

Price, heavily nickelled \$1.25

Claudius Ash, Sons & Co., Limited

Young's Adjustable Perforators

FOR PUNCHING TWO HOLES AT ONCE.



A—Screw which holds the back plate that clamps the pins.

B—Pins.

C—Intermediate Plate with holes that supports and stiffens the pins.

E—Slotted recess into which the metal backing is placed.

E—Lower Level.

F—Upper Level.

G—Groove in upper plate with holes into which the tooth to be backed before punching the backing.

Mr. Young claims that his tool secures, rapidly and with mathematical precision, exact correspondence between the holes in the metal plate used for backing teeth, and the pins of the tooth to be backed. It provides also for the quick and easy disengagement of the plate from the perforating pins after punching. The difficulty of separating, without twisting or injuring the perforated plate (the greatest obstacle to punching two holes at once), is entirely removed.

The risk of fracture in backing teeth is reduced to a minimum.

No measuring is required. The tooth is its own gauge, virtually punching its own holes.

Price, with Set Screw..... \$4.50

W E beg to announce that we have taken the sole agency and are placing in stock a complete assortment of DIMELOW DETACHABLE FACINGS, in both Veneers and all Porcelain Posterior Teeth.

In our next issue we will illustrate these teeth and can confidently recommend them to our customers as the most universal in their adaptability, as well as strongest and simplest detachable facing procurable.

We will shortly have ready for distribution a pamphlet giving you full information respecting them.

Claudius Ash, Sons & Co., Limited

PRACTISES FOR SALE AND HELP WANTED

- FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350
- FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -
- FOR SALE—Dental Practice in Eastern Ontario Town. Good Outfit. Practice yields \$2,000 per annum. Low expense. One visiting Dentist only in same location. Population of Town, 2,500. Apply Ash & Sons - 250
- FOR SALE—Dental Practice. Cobourg. Apply Ash & Sons 500
- FOR SALE—Dental Practice. St. Thomas, Ont. Fine equipment. High-class Practice. Apply Ash & Sons.
- FOR SALE—Dental Practice in Western Ontario. Practice runs over \$200 per month. No opposition. Price including Office Furniture, \$200. Apply C. Ash & Sons.

We have a good opening for a reliable Mechanic to start in business for himself in Ontario city. Apply C. Ash & Sons.

WANTED—A Graduated Assistant for all-round work. Must have experience and be sober. Apply C. Ash & Sons.

SECOND-HAND GOODS

- | | | |
|---|-----------|-------|
| I New Model Wilkerson Chair, A-1 condition | - - | \$160 |
| I S.S.W. Pattern Chair, Leg Base | - - - - - | 30 |
| I Case Harvard Chair | - - - - - | 20 |
| Contents Toronto City Operating Room. New. Apply Ash & Sons. | | |
| I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new | - - - - - | 60 |
| I Davis Gasometer, less Face Piece and Tubing, excellent condition | - - - - - | 18 |
| I Wetherby Suction Machine (new style), in A-1 condition | | 25 |
| I Pelton Porcelain Furnace, A-1 condition | - - - | 25 |
| I Davis Gasometer | | |
| I Mills Centrifugal Casting Outfit | - - - - - | 25 |
| I Olivian Swager | | |
| I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler | - - - - - | 12 |
| I American Cabinet, No. 60, in Antwerp Oak. Practically new | | 60 |
| I Electro Dental All Cord, Bracket Engine, 110 Volts, 60 Cycles alternating with hand pieces. Perfect condition | - | 80 |
| I Clark Regular Double Bowl Cuspidor. A-1 condition | - | 30 |
| I Ash Long Range Chair. A-1 condition | - - - | 125 |
| I Canadian Columbia Chair. Newly covered in Leather | - | 60 |

The Tooth of Service at Your Service

KAZAN TEETH

Are made by Johnson & Lund, of their famous high-fusing Porcelain, which has been favorably known by the profession for over half a century.

KAZAN PINS are double-headed and are fused into the porcelain—the one reliable method of attachment. KAZAN PINS are stronger than platinum, and of a size to render the maximum of service.

KAZAN TEETH are furnished in a great variety of shades, and a perfect assortment of molds, including natural forms for anatomical articulation.

Per Tooth, Gum or Plain... ..	\$ 0.10
Per Set of 14	1.00
12 Sets of 14	10.22
30 Sets of 14	24.90
63 Sets of 14	50.40
130 Sets of 14	100.10

SUBJECT TO USUAL CASH DISCOUNTS

Claudius Ash, Sons & Co., Limited

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showing photographic reproductions
in life size of all the

DAVIS CROWN MOLDS

THIS CHART

enables you to select the desired mold for your case, in your own office. It permits quick comparison of shapes and sizes which is otherwise impossible. It saves you the time, trouble and expense of sending your model to the depot for matching in.

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The Time to Test an Alloy is Before it is Made

If you were to make a batch of Alloy of a thousand ounces, then test it and find it deficient, would you like to discard it?

TWENTIETH CENTURY is not melted until its precise nature with a given batch of metals is determined—the character of the child is fixed before its birth.

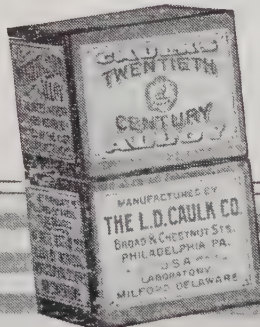
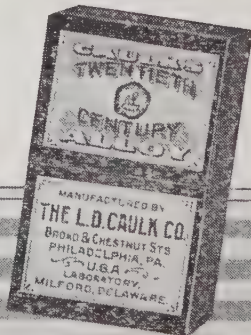
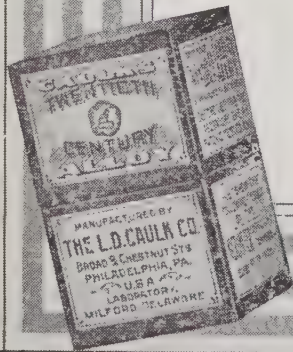
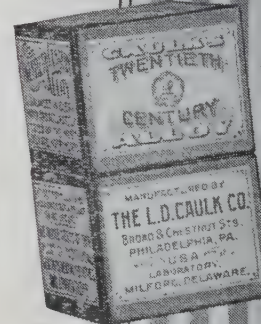
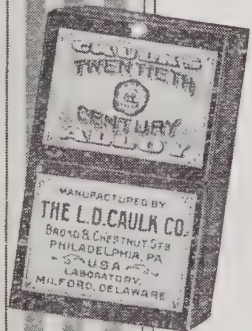
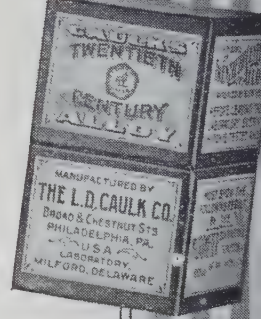
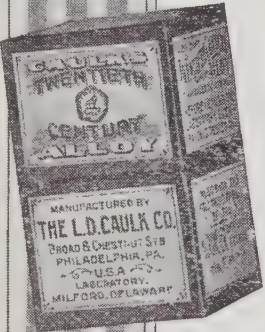
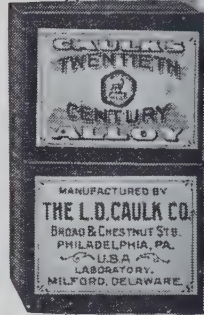
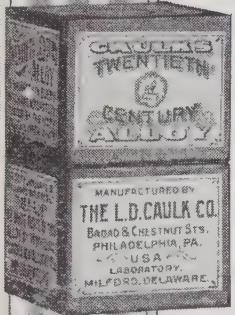
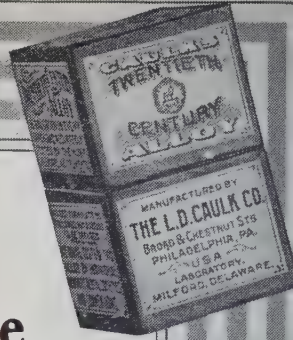
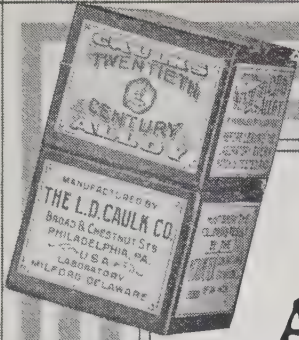
Before melting a batch of metals we make small trial ingots. These are cut, annealed and tested for expansion and contraction and for general behavior.

If these tests show the Twentieth Century Standard, the whole batch is melted; if there is shown any variation from this absolute standard, the formula is adjusted until accuracy is secured.

That is why Twentieth Century Alloy never varies—why it cannot vary.

Per oz. \$2.50; 5 oz. \$10.00

THE L. D. CAULK CO.



What the Leading European Dealers Think of Synthetic



Recently we wrote to seventy-two foreign dealers asking their experience in the sale of Synthetic Porcelain.

We asked these questions of all:—

1. What success have you had in its distribution?
2. Have your sales increased or decreased?
3. What do your customers think about it?
4. What are its sales in comparison with other silicates?

Replies are coming in every mail. At this writing thirty-six—just one-half—have responded. Not one utters a complaint or a discouraging word, but all unite practically in answering our questions as follows:—

1. Our sales of Synthetic have been phenomenal.
2. There has been a steady and wonderful increase.
3. Our customers are all pleased and enthusiastic.
4. Our sales of Synthetic are larger than of all the other silicates combined.

Your dealer has copies of these letters; ask to see them.

THE L. D. CAULK COMPANY

HORLICK'S MALTED MILK

**For INFANTS, INVALIDS,
the AGED and TRAVELERS
— IN TYPHOID FEVER —**

Pure, rich milk combined with an extract of malted grain, highly concentrated, partially pre-digested, palatable, and readily assimilated, makes **HORLICK'S Malted Milk** the physician's first choice when selecting a reliable nutriment in the treatment of Typhoid and other low fevers.

HORLICK'S Malted Milk has proved invaluable for many years past in the various diseases and conditions in which a complete, well-balanced diet is of vital importance.

A glassfull, taken hot upon retiring, proves an excellent "Night Cap" for the physician, when tired out or "chilled through."

Samples sent, free and perpaid, to the profession, upon request.

HORLICK'S MALTED MILK CO.
25 St. Peter Street, MONTREAL, Canada.

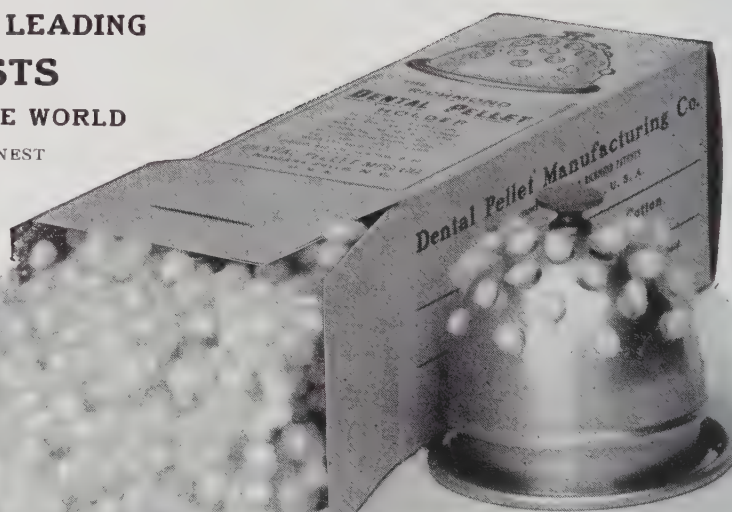
Richmond Dental Pellets

**USED BY THE LEADING
DENTISTS**

THROUGHOUT THE WORLD

MAN'G FROM THE FINEST
ABSORBENT COTTON

**Price 25c.
per
Packet**



For Sale at all Dental Depots or sent **DIRECT POST PAID**
RICHMOND DENTAL MFG. CO.
701 Confederation Life Building **TORONTO**

Second-Hand Goods

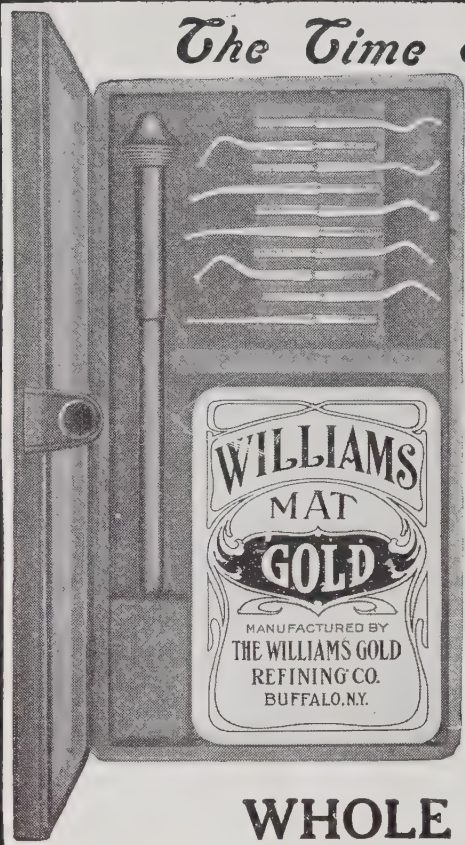
- 1 Canadian Columbia Chair. Leather. Good Condition
- 1 Harvard Oil Chair. Leather. Nearly new.
- 1 Harvard Mechanical Chair. Plush. Good Condition
- 1 S. S. White Wilkerson Chair. Plush and Cane Upholstery
- 1 S. S. White Wilkerson Chair. Leather Upholstery
- 1 Davis Vulcanizer. Good Condition
- 1 U. S. Dental Vulcanizer. Good Condition.
- 2 Small Foot Bellows
- 2 Cabinets
- 1 Ritter A. C. Engine, 110 V., Wall Type, 60 Cycle
- 1 Ritter A. C. Engine, 110 V., Cable Type, 60 Cycle
- Direct and Alternating Lathes

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TORONTO

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INTRODUCTORY PACKAGE

10 Pluggers	\$5.00
1 Handle	1.00
1-8 Oz. Gold	5.00
Morocco	
Plush Gold Case	1.00

Sold by All Dealers or
THE WILLIAMS GOLD REFINING COMPANY
 BUFFALO, NEW YORK

WHOLE OUTFIT \$6.00

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
 FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

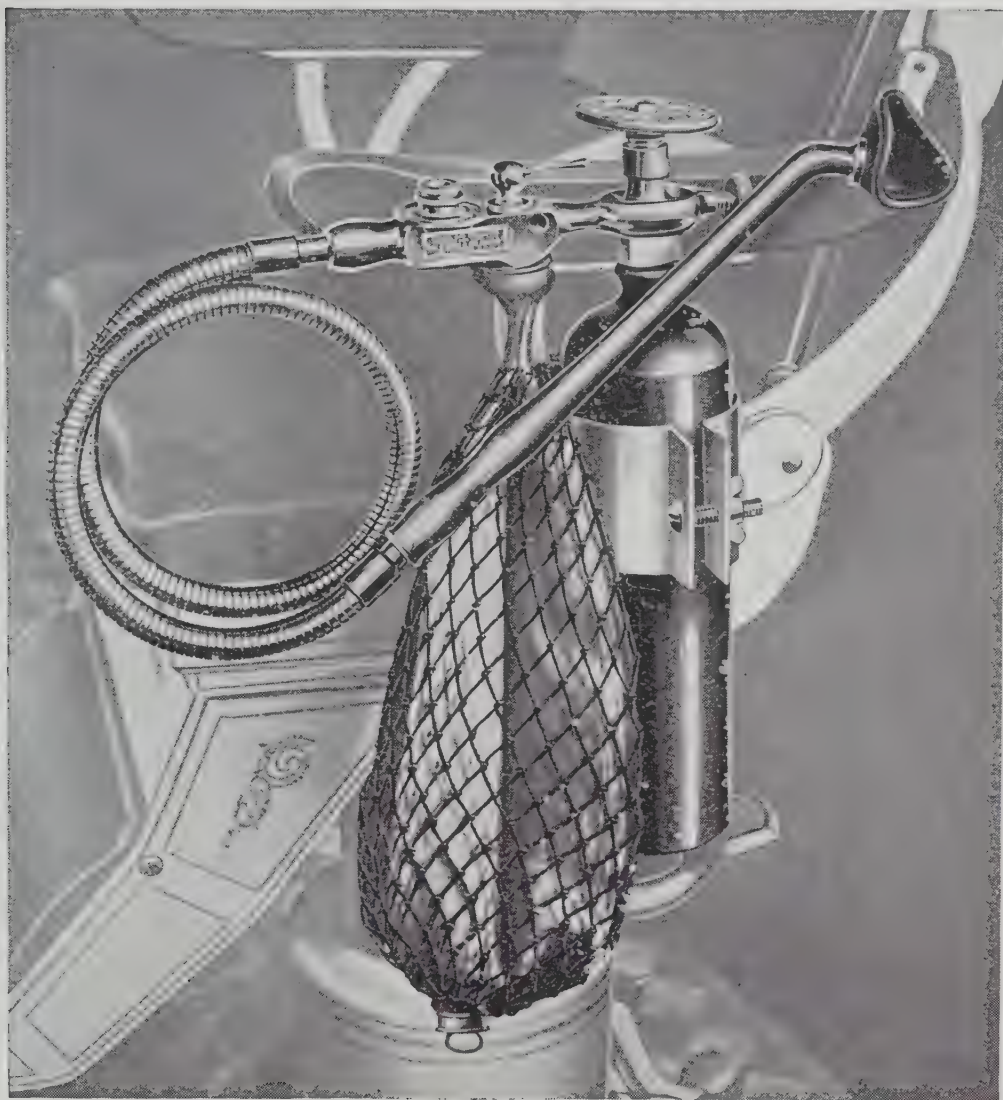
The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

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Analgesia by the Guedel Method



Perfect results in analgesia are attained very largely by suggestion and are in a direct ratio with the absence of fear on the part of the patient.

Under the Guedel self-administration method, fear is absolutely eliminated. The patient administers the mixture to himself. He knows perfectly well he is safe. He knows perfectly well he can take the inhaler away if he wants to. He also knows if he gets too much it will take itself away. It acts as a human automatic cut-off.

In this way his co-operation is secured. He is assisting you in the operation. He will help you rather than hinder you in your work.

In the Guedel Apparatus, air is used as a diluent for nitrous oxide, not as a substitute for oxygen but in preference to it and may be added in definite quantities of from 5 to 100 %. The mixture is entirely under control of the operator without the knowledge of the patient.

A 56 PAGE BOOK FREE.

Dr. Guedel's book on the self-administration of Nitrous Oxide contains all the information necessary to insure perfect results with this or any other apparatus. It is a scientific treatise on the administration of nitrous oxide and is the last word on the subject.

Send for it to-day. It is sent free on request.

The Guedel Apparatus complete with chair attachments as illustrated			
less cylinder and gas	-	-	\$30.00
Portable Stand, extra	-	-	5.00

LEE S. SMITH & SON COMPANY
PITTSBURG, U. S. A.

Nearly **Everybody's** Buying
 It **Buying** What?
 Why Buying **IT** Be Wise

GET BUSY TRYING IT NOW



The "IT" referred to above is

Our Enamel Rubber Plate

The only evenly thin, properly made Rubber Plate with the **Natural Rugae**, ever placed on the market (at the price) which is but \$1.00 more than the regular clumsy weight :: :: ::

CHARLES L. DALY

11-13 GRENVILLE STREET, TORONTO

one North 5776

DO YOU SAY "Use some good tooth paste or mouth wash" in reply to the question "What shall I use?" and leave it to your patient to *guess which one would prove most effective* in maintaining clean teeth and mouth health?

DO YOU HAND OUT a free sample of *whatever dentifrice happens to be nearest at hand* and thus practically endorse a preparation, concerning which your information is limited to the facts that *it is claimed to be meritorious; it tastes good, and its samples are free?*

PATIENTS are entitled to information and *advice that is the result of careful investigation*; such advice is the kind they are looking for and appreciate when given to them.

PYORRHOCIDE

(formula published)

the antiseptic, detergent and prophylactic tooth powder is NOT ADVERTISED TO THE PUBLIC but is now prescribed and recommended for patients' use by those progressive members of the dental and medical professions who appreciate the advantages of ORAL SANITATION and have been OPEN TO CONVICTION. DENTINOL (applied by the dentist) and PYORRHOCIDE (used by the patient) is the ONLY PYORRHOEA TREATMENT ever demonstrated to the profession, through the maintenance of FREE PYORRHOEA CLINICS for that purpose.

IT IS THUS PROVED that Pyorrhoea Alveolaris (Riggs' disease) can in practically all cases be cured and its recurrence prevented; also that *loose teeth* can, when sufficient bony process remains, be tightened.

DENTISTS IN EVERY COMMUNITY are using our treatment with marked success in establishing mouth health and are prescribing PYORRHOCIDE for general use as a prophylactic tooth powder, because *they know that the claims made in behalf of the preparation are substantiated by actual performance.*

FOR ETHICAL REASONS we do not publish testimonials but will be pleased to send, upon request, literature dealing with the subject of pyorrhoea treatment together with reprints of articles by prominent dentists, as taken from recognized leading dental journals.

A four-ounce can of Pyorrhocide at \$1.00 will outlast the quantity of ordinary pastes, powders or washes obtainable for the same money—it is thus economical as well as most effective. Pyorrhocide may be prescribed through ALL DENTAL SUPPLY HOUSES or any first-class druggist.

The Dentinol & Pyorrhocide Co.

1 Union Square W.

New York City, U.S.A.

JUSTI'S TEETH **are known wherever** **Dentistry is practised**

For over 50 Years we have Manufactured and Supplied Teeth to the Dental Profession

Our line of Molds—the largest in the World—makes it possible to supply the individual needs of any case.

The ARTISTIC blending of SHADES and INDIVIDUALITY of FORMS, aid the practitioner to make an artificial denture—excelled ONLY by NATURE ITSELF.

Plain Vulcanites, Platinum Pin Teeth.

Gum Blocks, Platinum Pin Teeth.

Facings, Platinum Pin Teeth.

Combination Sets, Platinum Pin Anteriors,
Diatoric Posteriors, Detachable Pin
Crowns,

Can you afford to use anything but the BEST?

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If You Believe in the Air Mixing
Theory, We Have a
\$30 Clark N20 Air Outfit

for some cases of
Short Analgesia and Anesthesia



Front view of
Nostril Inhaler
application.



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and Nostril Inhaler - - - - \$30 00

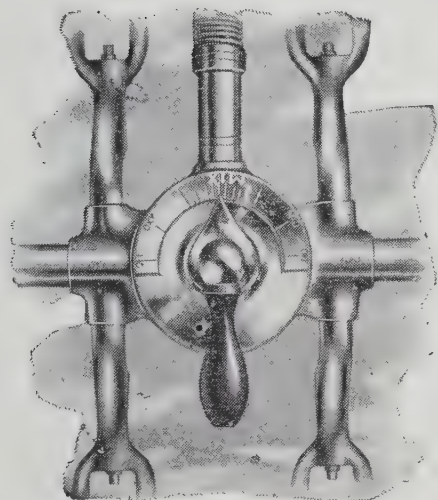
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Are you satisfied that the Alloy fillings you are now putting in are the best that can be made? We are sure they are not unless you are using



Absolutely no contraction
One 20000 of an inch expansion
Greatest edge strength known

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OUR FIRST PRINCIPLE:

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A SECONDARY BUSINESS CONSIDERATION:

A Secondary Class to Meet Competitive
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Our "Regular" Gold Solder, No. 18, is 16 karat quality
—contains 69 $\frac{1}{3}$ c of Pure Gold and sells at 85c. a dwt.

Some other makers of Solder in Canada supply an
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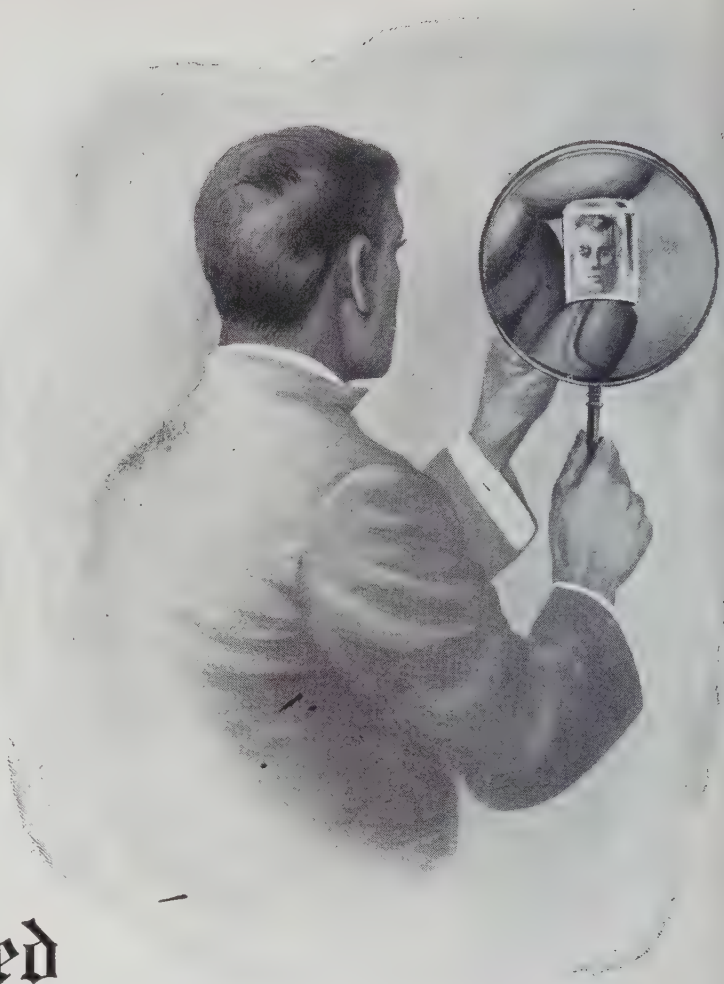
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The Better the Finish the Better the Work

¶ A crown or bridge with a fine finish is better than with a rough surface. The fine finish condenses the surface just enough to close the pores a little. It prevents the adhesion of deposits, resists better the attacks of chemicals contained in the food, is more welcome to the tissues, and is better in all ways.

¶ Such finish is now made easy for the dentist by the use of



Ney's Mirror Finished Seamless Gold Shells de Luxe

in which we give a mirror finish to the gold during the process of manufacture. This finish condenses the gold of the surface, as you would do it by hand burnishing. This finish may be carried throughout the operations of crown or bridge making.

¶ Crowns made with these shells are of unequalled beauty and hygienic value.

PRICES

	1 dwt.	20 dwt.	100 dwt.
22K Dark or Light, 30G	\$1.07	\$1.02	\$1.01
22K Dark or Light, 28, 29, 31, 32G	1.09	1.04	1.03

Paper labels discontinued.

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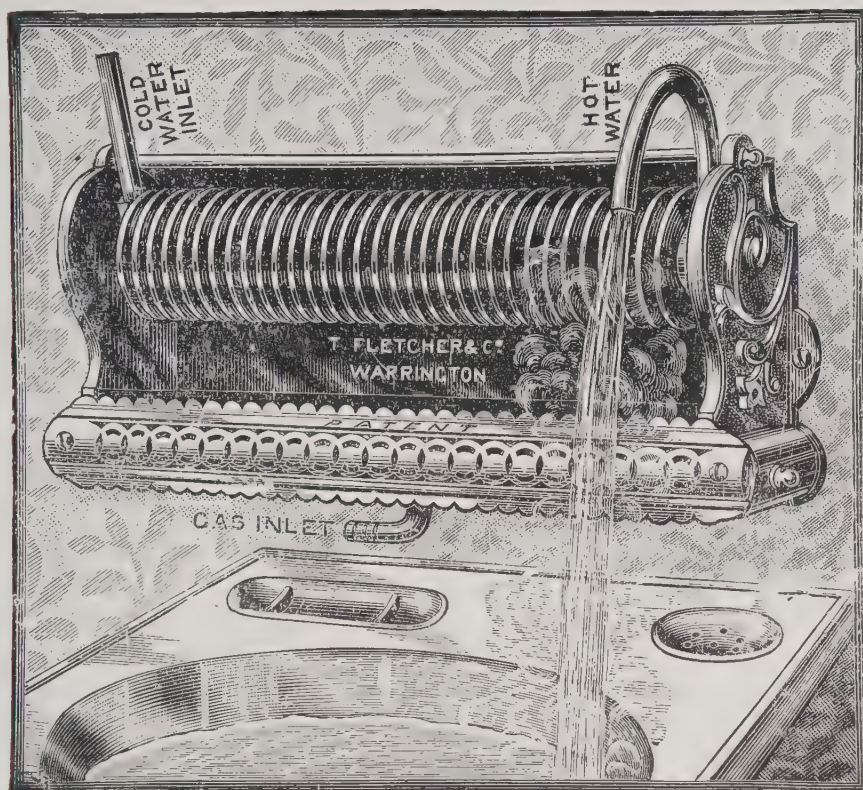
TWENTY-EIGHT SIZES.

FIVE LENGTHS.

Ask your dealer to show them to you---then ask us.

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Instantaneous Water Heater



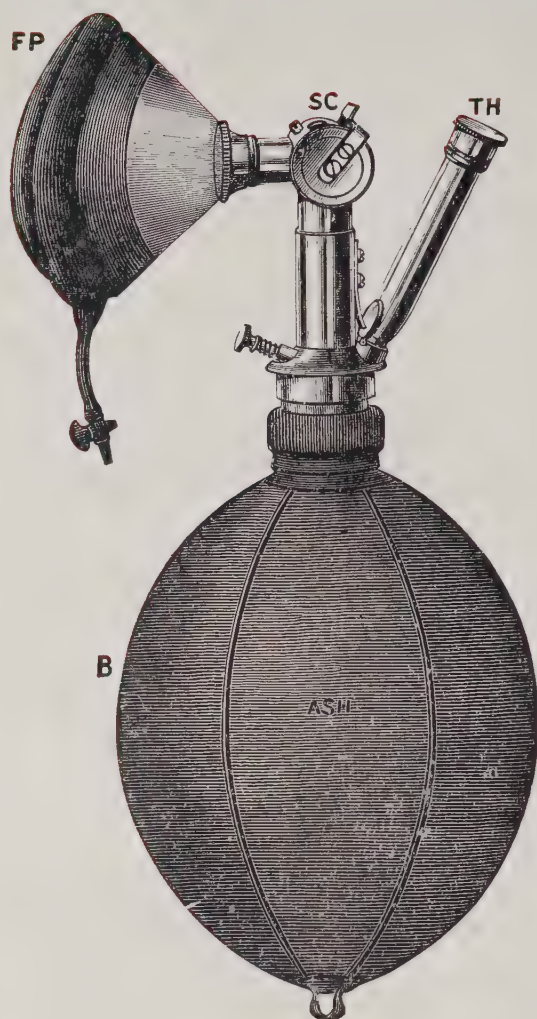
Now that the hot water supply given you by the building janitor has ceased, would it not be a great convenience to instal one of these heaters in your office or laboratory.

It gives a steady stream of nearly boiling water.

A $\frac{3}{8}$ in. clear bore gas supply is sufficient.

Plain	-	-	-	14.00
N.P.	-	-	-	16.00

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McFarlane's Inhaler

This inhaler is the best on the market for either Somnoforme or Ethyl Chloride. The materials, both metal and rubber are incomparable.

It is provided with a TWO WAY STOP COCK, which admits of the vapour being kept in the bag until it is required for use after the TUBE HAS BEEN BROKEN.

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AS Sole Agents of Messrs. J. Beutelrock & Son of Munich, we carry in stock a complete assortment of these Celebrated Drills for both No. 7 Hand Piece and No. 2 Right Angle.

PRICE—Single	-	-	35c. each
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WHO shoots at the mid-day
sun, though he be sure
shall never hit the mark, yet as
sure he is, he shall shoot higher
than who aims but at a bush.

—*Sir Phillip Sydney.*

TO teach high thought, and
amiable words,
And courtliness, and the desire
of fame;
And love of truth, and all that
makes a man.

—*Tennyson.*

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, JUNE 1, 1913

No. 9

INJURY TO THE SOFT TISSUES BY DENTURES*

By R. McKAY, L.R.C.P., M.R.C.S., L.D.S.

When one considers the numbers of ill-fitting dentures which are in use, it is surprising how little serious injury to the soft tissues of the mouth is seen in practice. It is possible that the majority of cases which become malignant pass direct to the general surgeon, but it would seem that the buccal mucous membrane is singularly tolerant of prolonged injury.

Exclusive of the injury sometimes seen with new dentures where the bite has been left hard, two main classes of injury may be considered, viz.:—

(1) Absorption of the alveolar processes with consequent settling of the denture.

(2) Uncleanliness and a general septic condition of the mouth and dentures.

Two cases presented themselves at the Hospital last year which will illustrate these types.

In one, direct injury resulted from the edge of a plate. The plate, an upper one, had been worn for fifteen years: odd natural teeth had been lost since, and absorption of the alveolar processes has taken place, with the result that the edge of the plate—itsself thin and sharp—had cut into the soft tissues of the sulcus over

1 2 3 4. The patient was a female over 70, and had noticed the sore place for two and a half years, but being unable to afford new teeth she put up with the discomfort as long as she was able. The ulcer was deep and clean cut, and with distinct hardening around. The mouth itself was clean.

The plate was left out, and the patient watched in view of possible malignancy. Marked improvement was seen in two weeks: the induration cleared up, and the ulcer slowly decreased in size, but a narrow fissure-like condition remained for over three months.

*From the Annual Reports of the Royal Dental Hospital of London.

This has now disappeared, and the epithelium over the part appears quite normal. All pain ceased with the removal of the denture, but the patient is still being kept under observation on account of her age and the duration of the injury.

In the other case vulcanite dentures had been worn for fifteen years, day and night. These, although "always cleaned," were filthy, and the mouth generally in a septic condition. The mucous membrane under the dentures was deeply congested, and the pathological report was "Epithelium slightly hypertrophied, otherwise normal without suggestion of new growth." In the left lower and right upper canine regions were large granulating ulcers. The condition cleared up with simple cleanliness and removal of the dentures.

These cases are of interest, since it is the association of long-continued irritation with sepsis which may be the starting point of malignant growths of the jaws. In the gums the growth may start from the edge round a septic tooth and invade the bone, whereas in the hard palate the edge of the plate may start the new growth.

With the absorption of the alveolar process in the mandibular incisor region the inner edge of the denture frequently causes a marked ulceration under the tongue. From a practical point of view it should be remembered that a well-recognized type of carcinoma occurs in this region called "sub-lingual" cancer. In ulceration apparently due to a denture it is well to exclude the possibility of the ulceration being malignant.

The septic condition illustrated by the second case is entirely preventable by simple cleanliness. It occurs in those who keep their dentures in the mouth day and night. Scrupulous cleanliness will not in these cases always prevent irritation. It is more marked when the surfaces in contact with the soft parts are of unpolished vulcanite, but is also seen with neglected metal cases.

PRACTICAL POINTS

Plaster of Paris.—Good plaster of Paris, when well matured and in the fittest condition for use, varies greatly in strength, according to the quantity of water with which it is mixed; e.g.:—

1 lb. of plaster to 9 ozs. of water, mixed quickly and well, will stand a breaking strain of 600 lbs. to the square inch.

1 lb. of plaster to 11 ozs. of water, a breaking strain of 450 lbs.

1 lb. of plaster to 13 ozs. of water, a breaking strain of 300 lbs.

1 lb. of plaster to 16 ozs. of water, a breaking strain of 50 lbs.

When plaster of Paris sets too quickly for comfortable use it is too new; in other words, it has not been allowed to mature by the manufacturer before being sold. It can be made to set more slowly by spreading out each lot, upon a large piece of paper, for an hour before it is required.

When plaster of Paris is old and sets slowly, it should be mixed with less water than usual.

The colder the water used for mixing with plaster of Paris, the more slowly it will set.

The older plaster of Paris is the more slowly it will set.

Plaster of Paris kept in a damp place soon perishes.

Due allowance must be made for the varying behaviour of plaster of Paris, due to changes of weather.

Plaster of Paris stored in a dry place will keep good for months.—C. Ash, Sons & Co.

Pith for Separating Teeth.—Mr. B. Butler finds that pith is better for separating teeth than cotton-wool, tape, gutta-percha, hickory wood, etc., etc., inasmuch as it is gentler in action and does not cause the pain and soreness which attend the use of some of these materials.

Pith is obtainable in cylindrical form, and can readily be compressed to any thickness required by the operator. When it is fixed between the teeth it gradually expands under the action of the oral fluids, and thus makes a space between the teeth.—C. Ash, Sons & Co.

Plaster Models.—The first and chief condition for the perfect fit of an artificial denture is an accurate impression. No other impression material has so far been found which offers as many advantages as plaster of Paris. Stents or wax impression materials yield good results only in mouths with very short teeth, or in edentulous cases, but in these a plaster impression can be removed whole without any difficulty. In mouths with long, irregular teeth, only poor impressions can be taken with impression materials, and it may be said that, as a rule, the more abnormally a mouth is built, the more is it necessary to make a plaster impression. Plaster, moreover, is much more hygienic than any other material.

as it can be used but once. In taking an impression of the upper jaw, the author recommends to seat the patient upright or slightly bending forward, with the head turned sidewise, in order to avoid any swallowing of plaster or nausea. In partial pieces the plaster is first broken from the mouth at the edentulous portion, except in cases where the six anterior teeth remain. Here the front portion is broken off first. The impression is easiest to assemble immediately after removing from the mouth, otherwise the plaster becomes too dry. If it is too moist, it is laid on a piece of blotting paper, which absorbs all surplus moisture. The impression tray is carefully cleaned, and all the pieces of the impression are wiped clean with a long and soft brush, especially at the surface which fits into the tray, in order to ensure perfect adaptation at the lines of fracture. The pieces are assembled in reversed order from that in which they have been removed. Small particles, however, are first glued to the larger ones with sandarac varnish. It is practical to assemble the whole impression outside of the tray, and then to fasten it to the clean tray with wax along the entire margin. Over the whole a strong solution of green soap is poured, which is washed off under the spigot. The model is then poured immediately while the impression is still wet.—Dr. C. Damsgaard, *Deutsche Zahnärztliche Zeitung*, Berlin, February 5, 1911.

After Extirpation of Pulp.—In the removal of the pulp following pressure anæsthesia, hæmorrhage from the apex is frequently experienced. If the broach has been cautiously passed up between the canal wall and the pulp to the apex, the pulp when extracted will come out—its apical end first—attached to the point of the broach. This is in most instances immediately followed by a rush of blood. As this floods into the cavity in the tooth it should be immediately washed away with water, before it has a chance of clotting or staining the dentine. For this purpose a small vulcanite hypodermic syringe with a long needle may be used. The latter can be inserted some distance into the canal, and the blood forcibly expelled. A wisp of cotton wrapped around a broach—an old one with the barb removed serves this purpose—is then immediately introduced into the canal, so as to fit it tightly, and kept there as a plug. In most cases it will be found necessary to repeat the plugging many times, until the dental napkin or waste-receiver becomes strewn with thin red lines of cotton. If, after several minutes, bleeding still continues on the removal of the plug, it is best to fill the canal with cotton steeped in adrenalin, and proceed with the preparation of an adjacent cavity or some other work. Adrenalin is the only drug that should be used in a root-canal after immediate pulp extirpation.—E. B. Nicholls, *Australian Journ. of Dentistry*.

ESSENTIAL POINTS IN SILICATE CEMENTS

The following article on Schoenbeck Cement, from the pen of Dr. F. Schoenbeck, will be of interest to the many users of this product.

What should a good silicate cement lay claim to?

This question may be answered by consideration of the following principia:

- (1) Easy manipulation.
- (2) Absence of contraction.
- (3) Natural adaptability as regards colour and transparency.
- (4) Mechanical resistance.
- (5) Chemical resistance.
- (6) Adhesion.

(Ad 1) *Easy Manipulation*.—By this is understood an easy way of mixing powder and liquid giving a normal period of setting.

This period depends on:

- (a) The fineness of the powder.
- (b) The concentration of the acid.
- (c) The temperature of the room in which it is being mixed and that of the mouth inside which it is to set.

Temperature exerts a great influence over the setting; from a higher temperature a quicker hardening and from a lower temperature a slower one will result. Dr. Schoenbeck's Silicate Cement has been so prepared as to give in mouth temperature a normal setting. Such a normal setting cannot be expected if the mixture be left on the slab when the normal setting is intended to take place inside the mouth. Through many careful experiments Dr. Schoenbeck has succeeded in so perfecting his preparation that it now rests entirely with the dentist to determine the duration of the setting process. It is in his power to accelerate or slacken—as he pleases—the process of hydration, according to his requirements. The setting will take longer by incorporating smaller quantities of powder into the amount of liquid required for the whole mixture and gradually adding more and more powder until the proper consistence has been attained and then by spatulating it thoroughly but rather longer on the slab. On the other hand if larger quantities of powder are at once incorporated and the time of mixing and spatulating it be shortened, the natural result will be that the chemical reaction will commence more quickly, i.e., the hardening will be accelerated.

(Ad 2) *Absence of Contraction*.—If a silicate cement mixture of proper consistence is allowed to remain in dry air it will shrink. But as inside the mouth quite different conditions pre-

vail, there is nothing detrimental in this. Most important, however, it is that during the setting and shortly afterwards no contraction should take place for such would most materially lessen the durability of the filling—leaving out of consideration the serious danger from the saliva and bacteria penetrating to the back of the filling through the minute openings, especially along the line of demarcation. During the chemical reaction Dr. Schoenbeck's Silicate Cement shows no contraction, but all others do.

(Ad 3) *Natural Adaptability as Regards Colour and Transparency.*—This has recently become the favoured hobby horse of, and elaborately expounded by, certain manufacturers, who claim to excel in this direction all others. This is sheer nonsense. The transparency of a good silicate cement should be not less but certainly not more than is necessary to match the natural teeth inside the mouth. Too much or too little transparency is equally objectionable. The latter gives the filling a dead, chalky appearance, whilst the former causes the filling to look glassy. It is really futile to test the transparency outside the mouth for there a silicate cement may have the look of a somewhat chalky substance, but inside the mouth, under the influence of the saliva and the proper light for it (and these are the conditions the serious and conscientious dentist has to reckon with), the same cement will at once assume a beautiful and lifelike surface. Very similar it is with the colour in silicate cements. It is absurd to bring into the market a "white" colour in silicate cement for nature knows neither white nor black and a white filling, in even the very whitest of tooth, looks unnatural.

(Ad 4) *Mechanical Resistance.*—This depends entirely upon the consistence and the proper handling of the mixture. Of course the chemical reaction should here be as well mentioned as being of great consequence, but while this is a matter in which the manufacturer only is concerned, the dentist's task is to see that he gets the proper chemical reaction by taking care he uses the correct proportions of powder and liquid. After a few trials in mixing he will soon have found these out, especially if he strictly follows the directions given, which alone will lead to the best results. Too thin a mixture will cause the presence of free acid in the filling. This may lead to pulp trouble and besides, through the action of the saliva, this acid will be washed out, leaving the filling porous and friable, so that it loses its power of resistance to all mechanical wear and tear and moreover encourages bacteria to enter with the saliva, undermining the filling and most likely causing even more serious trouble. Similar deteriorations will occur if the mixture has an excess of powder, tiny particles being constantly washed away, thus reducing the durability very considerably.

(Ad 5) *Chemical Resistance.*—This is subject to the action of the chemical ingredients which the manufacturer has used in the preparation. The main point—the most important one above all

others—is how the filling will resist the chemical and electrical action of the saliva. In most silicate cements this power of resistance is sufficiently great after petrification has taken place, but during the process of petrification the filling must absolutely be amply protected. The elastic and quickly drying varnish of Dr. Schoenbeck's has fully justified its claim as a most efficient protection.

(Ad 6) *Adhesion*.—This is decidedly greater in Dr. Schoenbeck's Silicate Cement than in others. This defect in the others may be accounted for by their contraction, for the shrinking proceeds from the periphery towards the centre of the filling, thereby loosening the hold on the cavity walls. It is recommended to prepare undercuts for all larger fillings although the danger of the filling falling out is with Dr. Schoenbeck's Silicate Cement not very great for its adhesiveness and a slight expansion are assisting to make it cling more tightly to the cavity walls. Cases have been recorded for fillings laid with this cement in shallow cavities, where no undercuts were possible, which after nearly five years were found to be practically intact.

THE NEW TOOTH

Dimelow Detachable Facings

THE manifold advantages of detachable teeth has been clearly demonstrated in recent years, yet for various reasons the only available detachable teeth have not become universal in their use.

We now offer you the Dimelow Detachable Facings which overcome all the objections put forward to other teeth of this class.

The following are some of the advantages:—

Ease in repairing, all being interchangeable.

Porcelain not subject to heat in Soldering.

Take up perfectly all gum recession.

Can be tipped with Gold if desired.

No weakness in tooth as body is not cut away.

No special Backings or Tools required.

In addition THE DIMELOW has all the advantages ever claimed by any detachable facings.

The posterior teeth are stocked in both veneer and all porcelain forms.

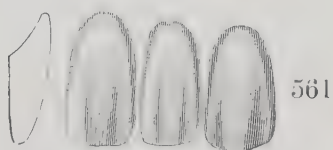
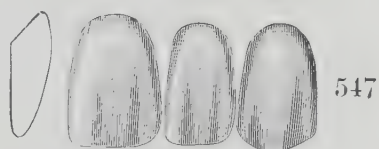
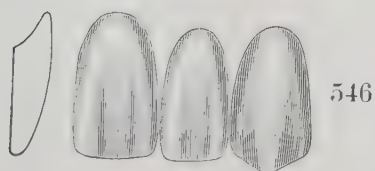
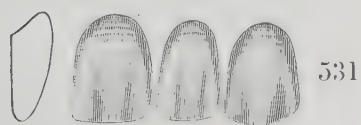
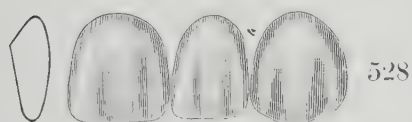
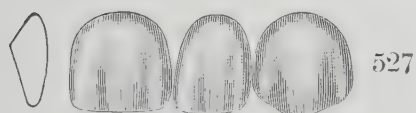
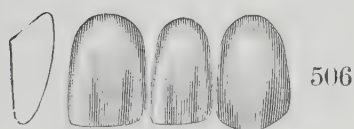
The three following pages illustrate the various moulds.

For prices and special assortment see outside back cover.

Claudius Ash, Sons & Co., Limited
SOLE AGENTS

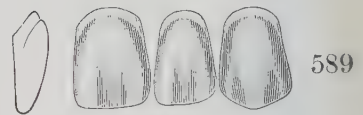
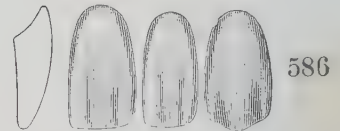
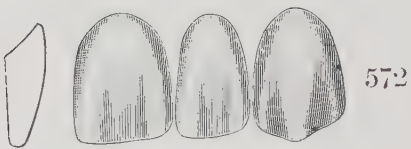
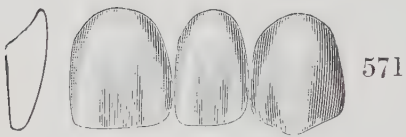
DIMELOW DETACHABLE FACINGS

Anterior Moulds



DIMELOW DETACHABLE FACINGS

Anterior Moulds



DIMELOW DETACHABLE FACINGS

Lower Moulds



501



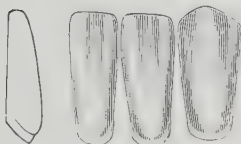
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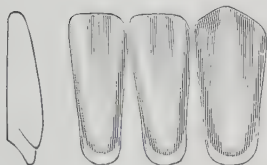
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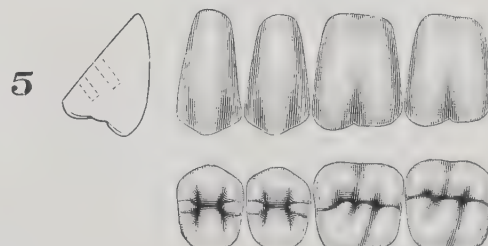
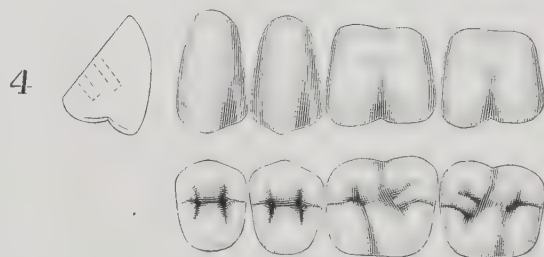
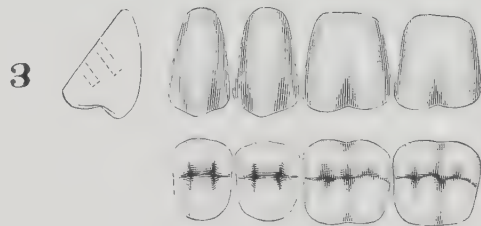
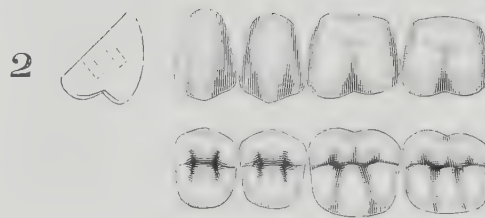
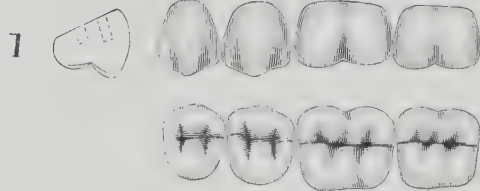


512



518

All Porcelain Posterior Moulds



Schoenbeck Cement

The following information coming direct from Dr. Schoenbeck regarding the setting of this Cement will be of interest to the many users of this product.

1 Too thin a mixture is a grave error, for it means discoloration and contraction.

2. Unless carefully and thoroughly mixed and spatulated no reliable filling material can be obtained.

3. The time of setting is depending upon the length of time employed in mixing as well as in trituration the mix after the proper consistency (that of glaziers putty) has been attained :—

(a) A quicker setting can be obtained by a quicker mixing and trituration, which must however be none the less as thorough as when more time is allowed for it.

(b) A slow setting is caused by a leisurely way of mixing and a longer spatulation on the slab after the proper consistence has been attained.

Claudius Ash, Sons & Co., Limited

11-13 Grenville Street

TORONTO - - - CANADA

Schoenbeck Silicate Cement

**The Nearest Approach to Nature's Enamel
Known to Dental Science.**

The illustrations shown on the next page are examples of work done with Schoenbeck Cement some years ago and which are to-day standing well nigh perfect. These are of course extreme cases, but we have on record in Canada other practical cases of wonderful restorations.

Schoenbeck's Silicate Cement is the only preparation of its kind that has been a scientific as well as a selling success without having a fortune spent in advertising it.

Its merits are its advertisement.

Write for book of instructions.

SUPPLIED IN THE FOLLOWING SHADES.

No. 1	Whitish	No. 8	Greenish Grey
2	White Yellow	9	Bluish White
3	Light Yellow	10	Brownish
4	Yellow	11	Pink Light
5	Dark Yellow	12	Pink Medium
6	Light Pearl Grey	13	Yellowish Grey
7	Pearl Grey	14	Brownish Grey
	15		Slate Bluish

PRICES.

1 Color, Small	.....	\$1.50	1 Color, Large	.....	\$3.00
4 Color Packet	.....	5.50	6 Color Packet	.....	8.00
1 Small Powder	.....	1.00	1 Small Liquid	.....	.50
1 Large Powder	.....	2.00	1 Large Liquid	.....	1.00

Pure Cocoa Butter	.....	Per Tube	.20
Schoenbeck's Special Varnish	.....	Per Bottle	.35

Reproduction of Restorations made by DR. A. McALPIN,
Bradford, Pa. with "SCHOENBECK CEMENT."



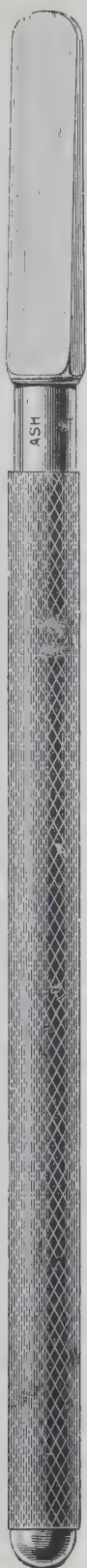
You Need a New Agate Spatula

The Agate Spatula is the most important aid to successful manipulation of all Silicate Cements.

Ash's Agate Instruments were the first on the market, and have always been the best.

Double End Agate Plastic Instrument	-	-	\$1.10
Single End Agate Spatula	-		.70
Double End Agate Spatula with Double Head Burnisher	-		1.50

Claudius Ash, Sons & Co., Limited



Globe Regulating Appliances

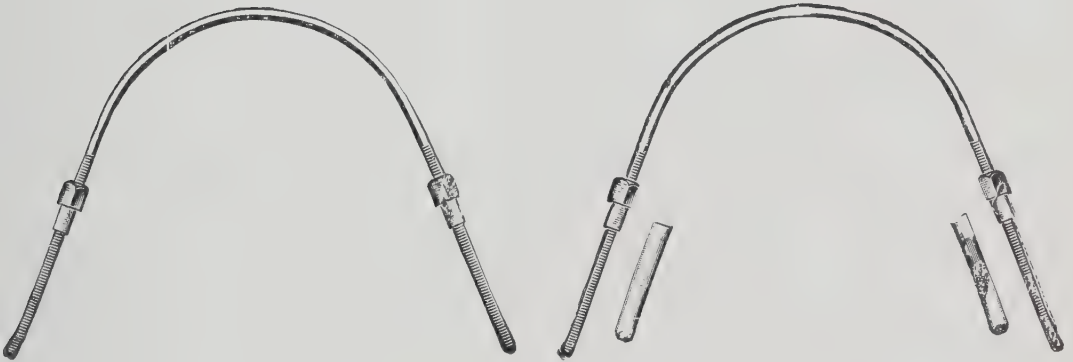
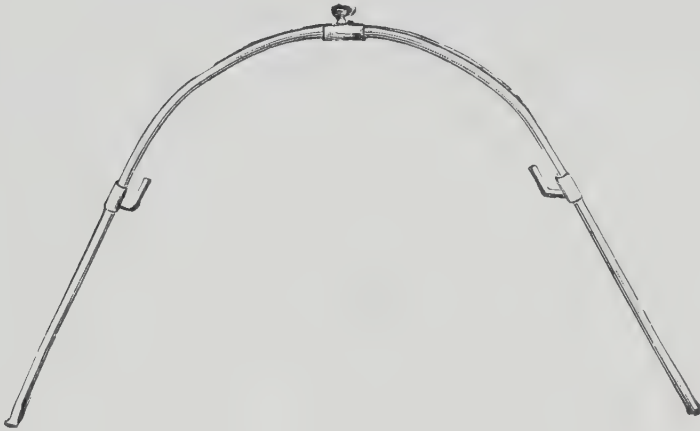
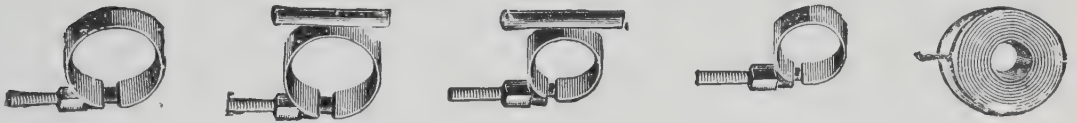
THE various parts of the Globe Appliances are made of reliable and suitable alloys, heavily gilt, and are considered exceptionally high class by the most eminent orthodontists. The quality, patterns and prices appeal to all practitioners who will also find it less expensive to employ them than to make similar appliances themselves.

No. 1.	Molar Band	\$ 80
No. 2.	Bicuspid Band	80
No. 3.	Molar Band with tube.....	85
No. 4.	Bicuspid Band with tube.....	85
No. 5.	Expansion Arch with nuts.....	1 00
No. 6.	Expansion Arch with nuts and tubes.....	1 15
No. 7.	Expansion Arch with two Molar Bands.....	2 25
No. 8.	Band Material 0.1 mm. thick.....	35
No. 9.	Contraction Arch with stud and hooks.....	1 15
No. 10.	Wrench.....	15
	Globe Regulating Wire, two gauges, per box.....	30
	Globe Regulating Rubber Ligatures, per box.....	50
	Globe Regulating Head Gear with heavy bands.....	3 80
	Globe Regulating Chin Cap.....	1 75

Note.—The No. 5 Arch can be supplied ribbed as well as plain.

Illustrations opposite page

Globe Regulating Appliances



Dr. Galloway's Suction Device

FOR

Lower Dentures Only

*Patented in the United Kingdom and in
the United States. Other Patents pending*

Dr. Galloway's Suction Device has been specially designed for lower dentures, and the need of such an aid has long been felt.

Its practical efficiency has been thoroughly tested by lengthened wear in the mouth.

It consists of a curved metal bar which has countersunk holes in it, four pins for securing the bar to the plaster model, and a vulcanized strip of specially prepared rubber.

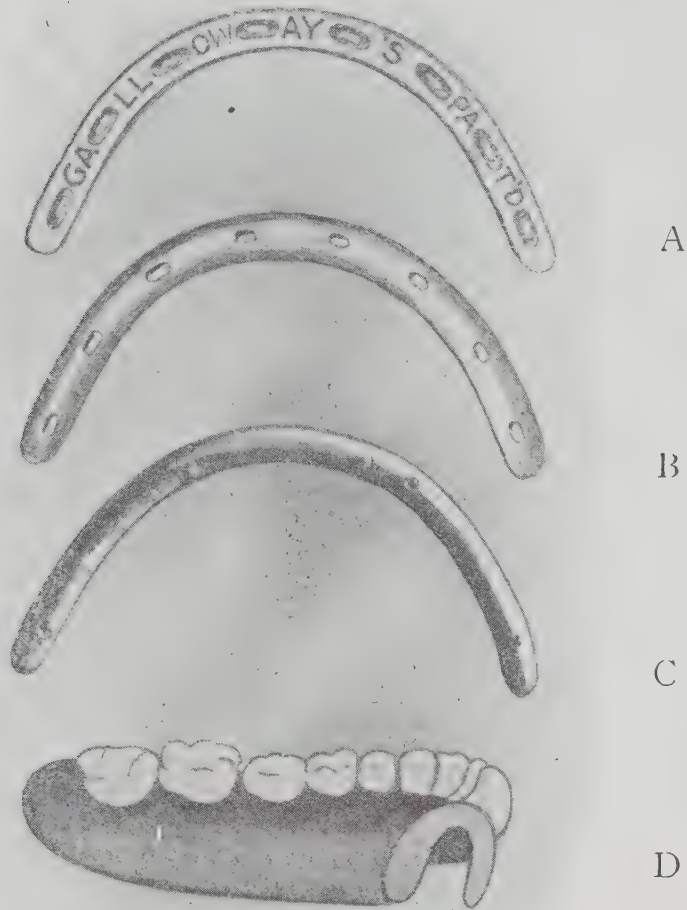
The rubber strip is held in position in the denture by the suction which is produced by the small holes on the curved surface, and to the gum by the suction through the larger holes on the flat surface.

The strip can be removed and replaced by the patient within half a minute.

There is enough suction produced, through the holes in the rubber strip, to hold the denture securely to the gum, without any discomfort to the patient.

Galloway's Suction Device—*Continued.*

FIG 1.



Natural size.

A and B show the flat and curved surfaces of the rubber strip and the holes which serve to retain the denture in position in the mouth.

C—Metal bar with countersunk holes into which the heads of the pins should be firmly pressed.

D—Section of denture which shows the rubber strip in position.

PRICE - - - - - \$1.00

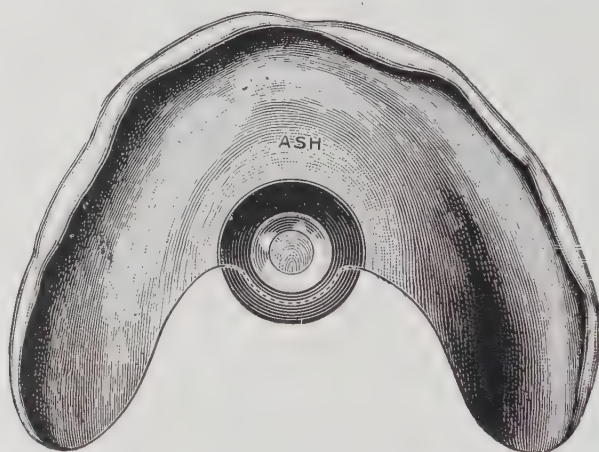
Claudius Ash, Sons & Co., Limited

Rauhe's Improved Suction Disc for Vulcanite Dentures

PATENTED IN ENGLAND, GERMANY, FRANCE, AUSTRIA-HUNGARY,
BELGIUM, THE UNITED STATES, ETC.

Rauhe's Suction Disc has been specially designed to prevent injury to the palate. It does not draw down the tissues and produce soreness in the mouth. In this respect it is greatly superior to all existing Suction Discs.

There are no parts about it which can be lost or misplaced, such as bolts or screws, etc.



It is easily kept clean, owing to the fact that the rubber disc can be removed and replaced in a few seconds, without the use of a tool of any kind.

The anchorage of the rubber disc is so simple that the patient can renew the disc when necessary.

The suction power of the disc is sufficient to hold a denture quite firmly and securely in position.

It is unnecessary to add clasps to partial sets which are fitted with Rauhe's Suction Disc.

DIRECTIONS FOR USE:

Press the disc on the most suitable part of the plaster of Paris model with the thumb, fasten it in position with the three small pins which are supplied with it, being careful to drive the heads right home, and pack the hole in the centre with dental

rubber. After the case is packed and vulcanized, strip off the tin form in which the stud is embedded; the portion in which the pins are driven should be removed first. To facilitate removal, cut through the tin, open it with a pocket knife or suitable tool, and strip it off. Should the edge of the stud be bent in stripping off the tin form, it can readily be straightened with any blunt tool. When the stud is thus cleared of the tin form, slip a rubber disc over it and the Suction Disc is ready for use. To do this, the rubber disc should be held down with the thumb of the left hand and stretched over the stud with the thumb and forefinger of the right hand.

In regard to the position in which the Suction Disc should be set on the plaster of Paris model, it will be obvious that the flattest part of the palate should be chosen. Two Suction Discs should be used on exceptionally high palates and on V-shaped palates—one on each side. In the case of large palates it is desirable to set the Suction Disc as far back as possible.

Sometimes the full power of the Suction Disc is not immediately exercised when it is first put into the mouth, but after it has been worn for some time its action will be perfectly efficient.

SPECIAL.—To remove the collar from beneath the Stud, after the case is vulcanized, insert the point of an excavator in the slit exactly opposite the letter C in the name C. Rauhe and open it out gradually, without levering it up, so as not to injure the stud.

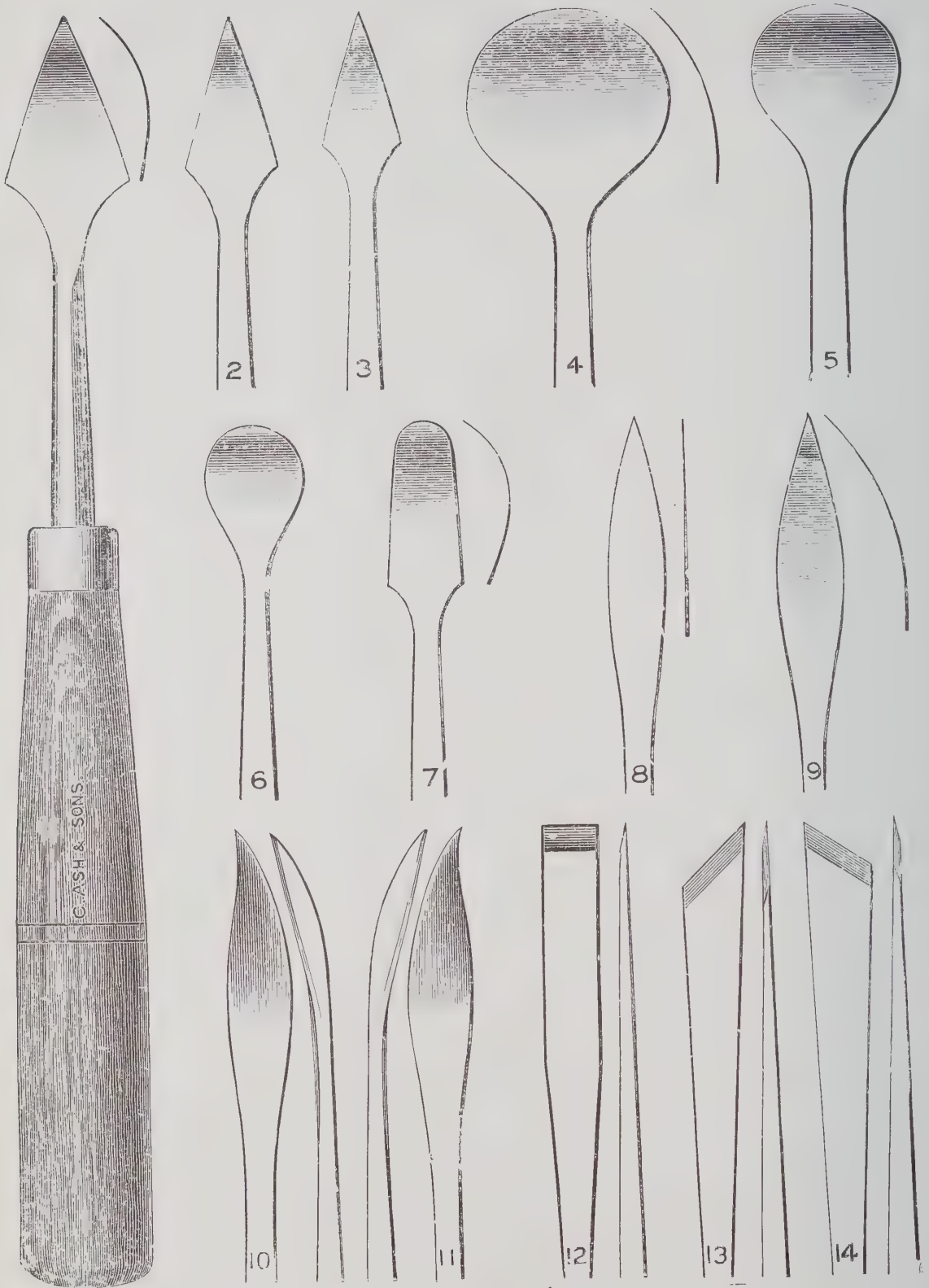
PRICES.

Rauhe's Suction Discs for Vulcanite Work:

Gold Stud with 3 India-Rubber Discs.....	each	\$ 1.00
	per doz.	11.25
Aluminum-Alloy Stud with 3 India-Rubber Discs	each	.50
	per half doz.	2.50
Extra India-Rubber Discs, any size	per doz.	.30

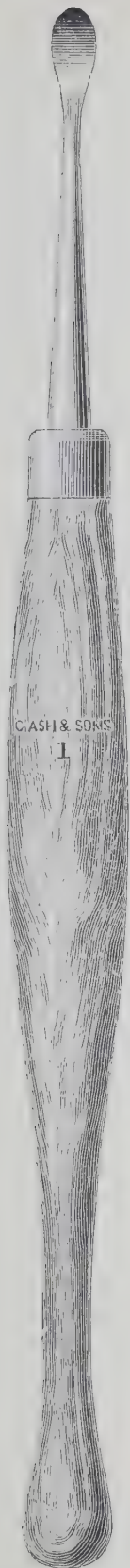
Claudius Ash, Sons & Co., Limited
SOLE AGENTS

VULCANITE SCRAPERS



PRICE, any size or shape, in wooden handle like Fig. 1 - - 30 Cents

KINGSLEY'S VULCANITE FINISHERS



The illustrations show the full size of each blade ; Fig. 1 shows the full length of each with handle ; and the outline on the side of Fig. 6 shows the curve of the blade.

In Polished Steel, with Wooden Handles

(Figs 1 to 6) each 30 Cents]

Carter's Celluloid Strips



These are the first Celluloid Strips that were put on the market for DENTAL USE, and they are still the best although they sell at a lower price than others.

They are invaluable in Silicate Cement Work, and for Matrices.

THIN AND EXTRA THIN

PER BOX - - 35 CENTS

Claudius Ash, Sons & Co., Limited

PRACTISES FOR SALE AND HELP WANTED

FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350

FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -

FOR SALE—Dental Practice. Cobourg. Apply Ash & Sons 500

WANTED—A Graduated Assistant for all-round work. Must have experience and be sober. Apply C. Ash & Sons.

SECOND-HAND GOODS

I New Model Wilkerson Chair, A-1 condition	- -	\$160
I S.S.W. Pattern Chair, Leg Base	- - - - -	30
I Case Harvard Chair	- - - - -	20
I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new	- - - - -	60
I Davis Gasometer, less Face Piece and Tubing, excellent condition	- - - - -	18
I Wetherby Suction Machine (new style), in A-1 condition		25
I Pelton Porcelain Furnace, A-1 condition	- - -	25
I Davis Gasometer	} - - - - -	25
I Mills Centrifugal Casting Outfit		
I Olivian Swager		
I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler	- - - - -	12
I American Cabinet, No. 60, in Antwerp Oak. Practically new		60
I Electro Dental All Cord, Bracket Engine, 110 Volts, 60 Cycles alternating with hand pieces. Perfect condition	-	80
I Clark Regular Double Bowl Cuspidor. A-1 condition	-	30
I Ash Long Range Chair. A-1 condition	- - -	125
I Canadian Columbia Chair. Newly covered in Leather	-	60
I S.S.W. Leg Base Oil Chair	} - - - - -	75
I Golden Oak Clark Cabinet		
I S.S.W. Metal Fountain Cuspidor		
I Leighton-Jackes Switch Board. Onyx Face and Shelf. Nearly new. Perfect condition. 110 Volts. 60 Cycles alternating. Price including Electro Dental H.A. Syringe		125

The Tooth of Service at Your Service

KAZAN TEETH

Are made by Johnson & Lund, of their famous high-fusing Porcelain, which has been favorably known by the profession for over half a century.

KAZAN PINS are double-headed and are fused into the porcelain—the one reliable method of attachment. KAZAN PINS are stronger than platinum, and of a size to render the maximum of service.

KAZAN TEETH are furnished in a great variety of shades, and a perfect assortment of molds, including natural forms for anatomical articulation.

Per Tooth, Gum or Plain.....	\$ 0.10
Per Set of 14	1.00
12 Sets of 14	10.22
30 Sets of 14	24.90
63 Sets of 14	50.40
130 Sets of 14	100.10

SUBJECT TO USUAL CASH DISCOUNTS

Claudius Ash, Sons & Co., Limited

SOLE AGENTS FOR CANADA

THE PINS STAY IN

You can depend on that
when you use Consoli-
dated Porcelain Teeth

They are
Fused-in



The Time to Test an Alloy is Before it is Made

If you were to make a batch of Alloy of a thousand ounces, then test it and find it deficient, would you like to discard it?

TWENTIETH CENTURY is not melted until its precise nature with a given batch of metals is determined—the character of the child is fixed before its birth.

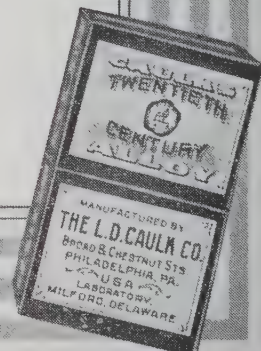
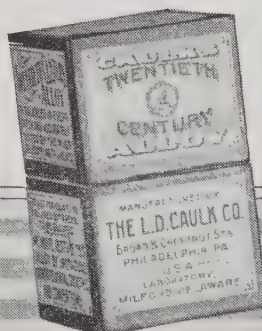
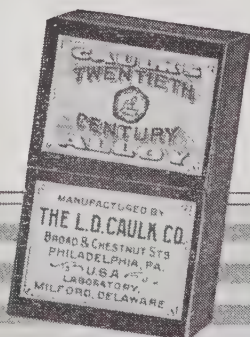
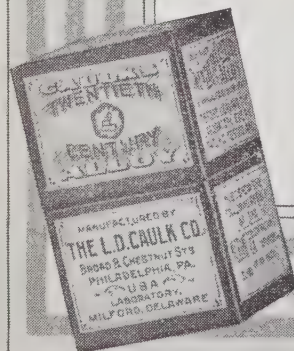
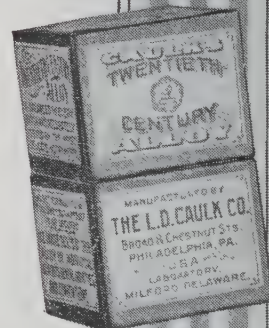
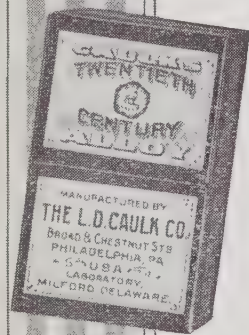
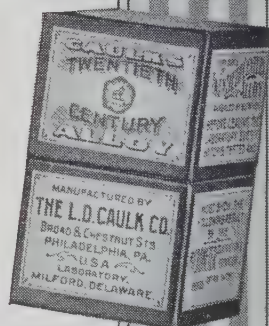
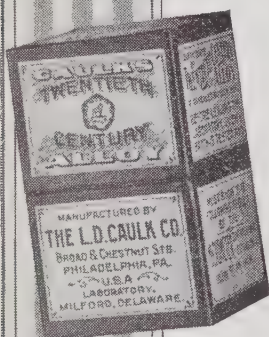
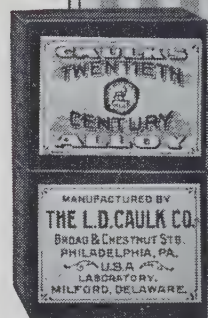
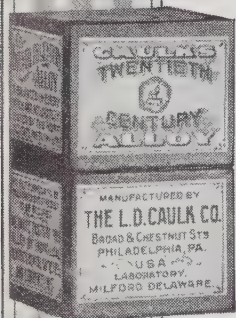
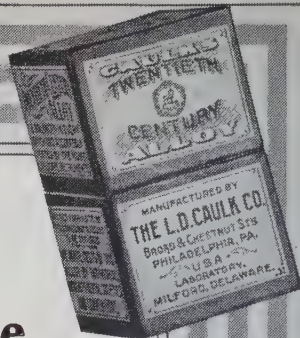
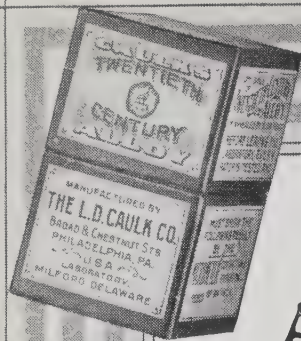
Before melting a batch of metals we make small trial ingots. These are cut, annealed and tested for expansion and contraction and for general behavior.

If these tests show the Twentieth Century Standard, the whole batch is melted; if there is shown any variation from this absolute standard, the formula is adjusted until accuracy is secured.

That is why Twentieth Century Alloy never varies—why it cannot vary.

Per oz. \$2.50; 5 oz. \$10.00

THE L. D. CAULK CO.



What the Leading European Dealers Think of Synthetic



Recently we wrote to seventy-two foreign dealers asking their experience in the sale of Synthetic Porcelain.

We asked these questions of all:—

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4. What are its sales in comparison with other silicates?

Replies are coming in every mail. At this writing thirty-six—just one-half—have responded. Not one utters a complaint or a discouraging word, but all unite practically in answering our questions as follows:—

1. Our sales of Synthetic have been phenomenal.
2. There has been a steady and wonderful increase.
3. Our customers are all pleased and enthusiastic.
4. Our sales of Synthetic are larger than of all the other silicates combined.

Your dealer has copies of these letters; ask to see them.

THE L. D. CAULK COMPANY

The Time Saver in Dentistry

Are You Using the Universal Filling Gold ?




**WILLIAMS
MAT
GOLD**
MANUFACTURED BY
THE WILLIAMS GOLD REFINING CO.
BUFFALO, N.Y.

INTRODUCTORY PACKAGE

10 Pluggers	\$5.00
1 Handle	1.00
1-8 Oz. Gold Morocco	5.00
Plush Gold Case	1.00

Sold by All Dealers or
THE WILLIAMS GOLD REFINING COMPANY
BUFFALO, NEW YORK

WHOLE OUTFIT \$6.00

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

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TELEPHONES MAIN 364

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TRANSLUCIN A SILICATE CEMENT FROM GERMANY

We frankly believe TRANSLUCIN to be superior to any other silicate cement on the market.

This broad statement is not the result of hearsay evidence, nor is it based entirely upon the investigations and reports of others, although these investigations cover a period of two years. Our own severe tests for the past six months more than confirm the gratifying results reported by all other investigators.

SO, WE BELIEVE IMPLICITLY IN TRANSLUCIN.

But we realize that to you all the above is unsatisfactory in a measure—YOU want to test it yourself.

When we tell you that TRANSLUCIN is more translucent, more dense, more adhesive and more easily manipulated than any other silicate cement, we are simply stating the results of our own and others' experience—not nearly so important to you as *your* experience.

Ask us, therefore, to send you a sample of TRANSLUCIN. We will appreciate it greatly if you will let us know the result of *your* tests.

LEE S. SMITH & SON COMPANY

Sole Agents for

North and South America, New Zealand, Australia and Japan.

PITTSBURG, U. S. A.

Nearly **Everybody's** Buying
It **Buying** What?
Why Buying **IT** Be Wise

GET BUSY TRYING IT NOW



The "IT" referred to above is

Our Enamel Rubber Plate

The only evenly thin, properly made Rubber Plate with the **Natural Rugae**, ever placed on the market (at the price) which is but \$1.00 more than the regular clumsy weight :: :: ::

CHARLES L. DALY

11-13 GRENVILLE STREET, TORONTO

Telephone North 5776

DO YOU SAY "Use some good tooth paste or mouth wash" in reply to the question "What shall I use?" and leave it to your patient to guess *which one would prove most effective* in maintaining clean teeth and mouth health?

DO YOU HAND OUT a free sample of *whatever dentifrice happens to be nearest at hand* and thus practically endorse a preparation, concerning which your information is limited to the facts that *it is claimed to be meritorious; it tastes good, and its samples are free?*

PATIENTS are entitled to information and *advice that is the result of careful investigation*; such advice is the kind they are looking for and appreciate when given to them.

PYORRHOCIDE

(formula published)

the antiseptic, detergent and prophylactic tooth powder is NOT ADVERTISED TO THE PUBLIC but is now prescribed and recommended for patients' use by those progressive members of the dental and medical professions who appreciate the advantages of ORAL SANITATION and have been OPEN TO CONVICTION. DENTINOL (applied by the dentist) and PYORRHOCIDE (used by the patient) is the ONLY PYORRHOEA TREATMENT ever demonstrated to the profession, through the maintenance of FREE PYORRHOEA CLINICS for that purpose.

IT IS THUS PROVED that Pyorrhoea Alveolaris (Riggs' disease) can in practically all cases be cured and its recurrence prevented; also that *loose teeth* can, when sufficient bony process remains, be tightened.

DENTISTS IN EVERY COMMUNITY are using our treatment with marked success in establishing mouth health and are prescribing PYORRHOCIDE for general use as a prophylactic tooth powder, because *they know that the claims made in behalf of the preparation are substantiated by actual performance.*

FOR ETHICAL REASONS we do not publish testimonials but will be pleased to send, upon request, literature dealing with the subject of pyorrhoea treatment together with reprints of articles by prominent dentists, as taken from recognized leading dental journals.

A four-ounce can of Pyorrhocide at \$1.00 will outlast the quantity of ordinary pastes, powders or washes obtainable for the same money—it is thus economical as well as most effective. Pyorrhocide may be prescribed through ALL DENTAL SUPPLY HOUSES or any first-class druggist.

The Dentinol @ Pyorrhocide Co.

1 Union Square W.

New York City, U.S.A.

It's so Easy to Get Results with Justi's **TRUE-TO-NATURE TEETH** **Anteriors** **Posteriors**

After selecting teeth of the proper shade, length and fullness, set the upper anteriors and bicuspids in positions.

Then set up the lower second bicuspid on each side, next the first bicuspids.

You now have a given space for the lower anteriors, which must fill this space to articulate properly.

The lower molars are now placed in position with a slight upward slant or tilt—this gives the compensating curve which is absolutely necessary for proper articulation.

The upper molars are now set up and will occlude perfectly with the lowers.

You will find in setting them up in this manner that each tooth has its respective place and occludes properly with the opposite tooth.

May we send you a Booklet of Molds?

If your Dealer cannot supply you, order direct from us.

H. D. JUSTI & SON
Philadelphia **Chicago**

THIS INVESTMENT PAYS DIVIDENDS



The users of Clark Fountain Spittoons and Clark Gas Apparatus form in themselves a blue book of the Dental Profession. They comprise the Prosperous and Happy Class, because they recognize the financial returns of equipment that affords Hygiene and Sanitation to both them selves and patient and an apparatus that will shorten their hours and make their work painless, profitable and healthful in a strictly ethical sense.

A. C. CLARK & CO.

Grand Crossing,

Chicago, Ill.

Ask us about our
Exchange Proposition
on Spittoons. Drop us
a postal card to-day.

You should read our
interesting lectures on An-
algesia and Anaesthesia as
prepared by experts.

Mailed free to you on
request.

Are you satisfied that the Alloy fillings you are now putting in are the best that can be made? We are sure they are not unless you are using



Absolutely no contraction
One 20000 of an inch expansion
Greatest edge strength known

Ask Your Dealer

We Know How

Others May Copy.

OUR FIRST PRINCIPLE:

To Produce Metallurgical Supplies of
Highest Merit.

A SECONDARY BUSINESS CONSIDERATION:

A Secondary Class to Meet Competitive
Market Conditions in Cheapness.

Examples :

Our "Regular" Gold Solder, No. 18, is 16 karat quality
—contains 69 $\frac{1}{3}$ c of Pure Gold and sells at 85c. a dwt.

Some other makers of Solder in Canada supply an
article that by repeated analytical test in independent
laboratories, assays between 12 and 13 karat, contains
52 to 56 $\frac{1}{3}$ c of Pure Gold and sells at 80c. a dwt.

Your Choice:

69 $\frac{1}{3}$ c of Gold delicately
alloyed with purest of ele-
mental metals for 85c. a dwt.

OR

52c. to 56 $\frac{1}{3}$ c. of Gold with
extra Copper to maintain
color, lacking technical super-
vision, for 80c. a dwt.

Highest Quality Jealously Guarded.

The J.E. WILKINSON COMPANY, LIMITED.

The Better the Finish the Better the Work

¶ A crown or bridge with a fine finish is better than with a rough surface. The fine finish condenses the surface just enough to close the pores a little. It prevents the adhesion of deposits, resists better the attacks of chemicals contained in the food, is more welcome to the tissues, and is better in all ways.

¶ Such finish is now made easy for the dentist by the use of

Ney's Mirror Finished Seamless Gold Shells de Luxe

in which we give a mirror finish to the gold during the process of manufacture. This finish condenses the gold of the surface, as you would do it by hand burnishing. This finish may be carried throughout the operations of crown or bridge making.

¶ Crowns made with these shells are of unequalled beauty and hygienic value.

PRICES

	1 dwt.	20 dwt.	100 dwt.
22K Dark or Light, 30G	\$1.07	\$1.02	\$1.01
22K Dark or Light, 28, 29, 31, 32G	1.09	1.04	1.03

Paper labels discontinued.

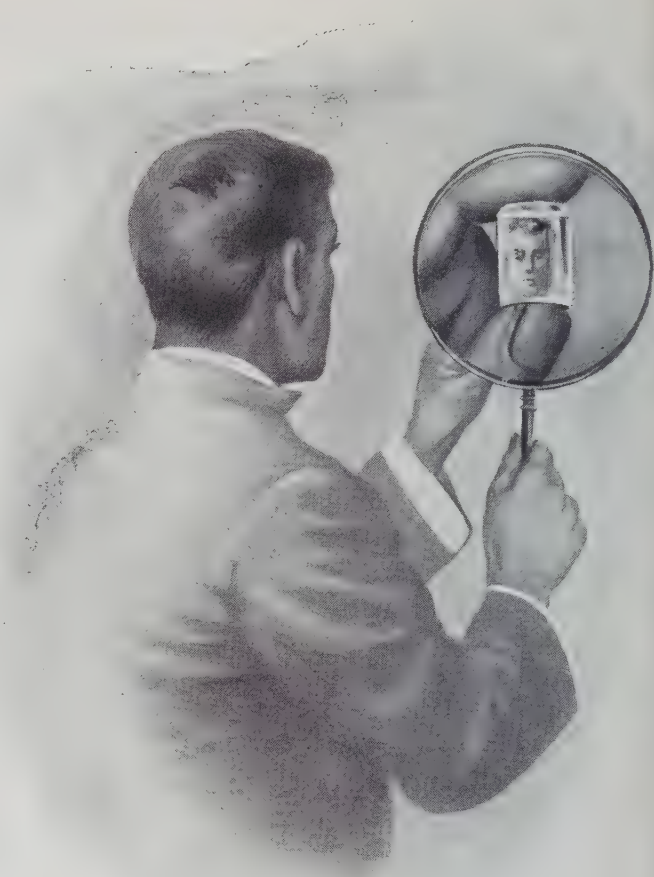
Shells stamped on the inside.

TWENTY-EIGHT SIZES.

FIVE LENGTHS.

Ask your dealer to show them to you---then ask us.

THE J. M. NEY COMPANY, Hartford, Conn., U. S. A.



RADICIN

(LEPOWSKI)

**HAS CURED THOUSANDS OF
CASES OF
PUTRESCENT PULP
TROUBLE IN ONE SITTING**

SEND A MAIL ORDER NOW

PASTE and LIQUID - \$1.50

Claudius Ash, Sons & Co., Ltd.
SOLE AGENTS

Ask about Bleaching with Radicin

Dimelow Detachable Facing

THE NEW TOOTH

Can be mounted with or without a tip and is the ideal Bridge Tooth.

We are mailing you a booklet shewing technique. It will interest you.

Posteriors are made in both Veneers and all Porcelain forms.

Excellent moulds and shades of Johnson & Lund's well known bodies.

PRICES

Per Tooth	-	-	\$.25
108 Teeth	-	-	25.00
228 Assortment in Case			50.00
Staples for Anteriors	-		.05
Staples for Posteriors	-		.10

ALL STAPLES MADE OF GOLD, PLATINUM & SILVER IN THE FOLLOWING PROPORTIONS, 10, 20, & 70 PER CENT.

Claudius Ash, Sons & Co., Ltd.

Sole Agents

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CANADIAN MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

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CANADIAN BRANCH,

11-13 GRENVILLE ST. TORONTO, CANADA.

MAIN DEPOT

LONDON, W. ENGLAND.



Dimelow
Detachable Facings

Will Give You Better Service

ASK FOR BOOKLET

Claudius Ash, Sons & Co., Limited

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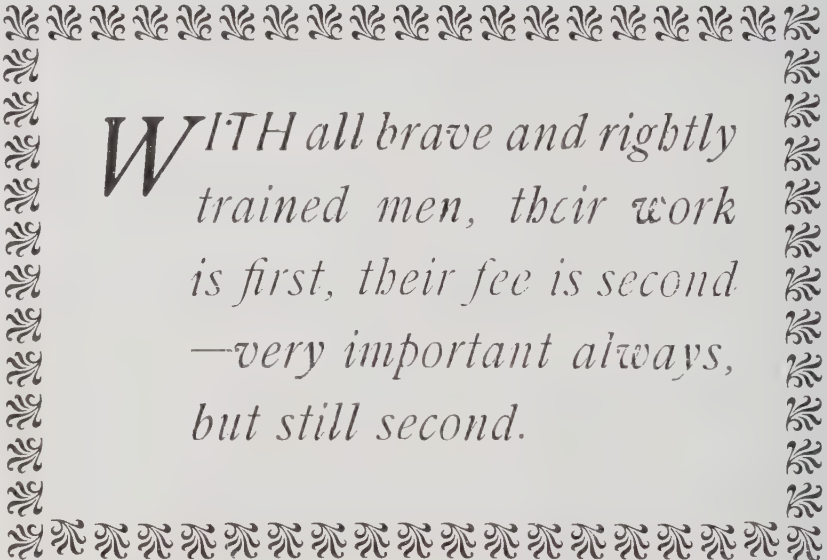
JULY, 1913

COVER DESIGN—

Yacht "Grayling," R.C.Y.C.

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Advertising Section	-	-	-	Page 7
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Advertising Section	-	-	-	Page 26



*WITH all brave and rightly
trained men, their work
is first, their fee is second
—very important always,
but still second.*

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, JULY 1, 1913

No. 10

PRACTICAL POINTS

Vulcanite Dentures.—After packing the rubber in the flask, and before closing same in the press, it is customary to place a piece of linen over the teeth and rubber to prevent the two parts sticking together. When the rubber is heated the linen frequently sticks to the rubber, and it is very difficult to remove without dislodging the teeth or breaking away the edges of the plaster. This difficulty can be entirely overcome by cutting the linen into strips about half an inch wide and placing them transversely across the flask. These strips can be quite easily removed without displacing either teeth or rubber.—C. Ash, Sons & Co.

To Clean Vulcanite Files.—When a vulcanite file becomes clogged with rubber and plaster, it may easily be cleansed by wrapping absorbent cotton around it and saturating the cotton with chloroform. In about ten minutes it can be cleaned perfectly by the use of a stiff brush wheel on the lathe.—Prinz, Dental Formulary.

To Remove Glaze from Carborundum Stones.—To renew carborundum stones that have become glazed from grinding down teeth containing amalgam fillings, place them in a beaker and cover with a 5 per cent. solution of nitric acid, allowing them to stand for two or three hours. Remove and place in a strong solution of sodium bicarbonate for several hours, that the acid which has been absorbed by the stones may be neutralized.—Prinz, Dental Formulary.

Bacteriology of Tooth-Brushes.—It is claimed by Smale and Jones that a tooth-brush becomes septic after once using, each hair becomes an inoculation needle, and the person using it may become vaccinated with such germs as flourish in it; the tooth-brush, therefore, as popularly used—namely, for many months—may be the organ of pyorrhœa alveolaris, which may lead to such grave consequences as anæmia, gastritis, or arthritis. The prevalent tooth powders and tooth pastes as usually used do not render the tooth-brush aseptic, and even 1 in 20 carbolic acid is not effectual in so doing. The authors insist that all tooth-brushes

should be boiled for five minutes before and after use, or a new tooth-brush used each day. Those wishing for a more prolonged use of a tooth-brush can rinse the brush in trikresol (1 per cent.), or allow it to stand between use in formalin (10 per cent.). These remarks are based on extended experiments.—British Medical Journal.

For removing the gum over the posterior portion of a half-erupted inferior third molar that has become swollen and painful. Dr. L. R. Pond says he knows of nothing better or quicker, and with little or no pain, than a knife-edged steel disc of about one-third of an inch in diameter, mounted on a mandrel for the engine and revolving at high speed. It will cut without displacing the tissues, and there is little or no pressure required.—Dental Digest.

Babylonian Dentistry.—The Rev. Dr. F. C. Eisen, Professor of Old Testament interpretation in Chicago, has just translated a love letter written on a baked brick in Babylon four thousand years ago, which has been found in recent excavations. It contains a unique cure for the toothache, and the avowals of the writer's warmest affections for his lady love and his intense desire that she should come to him in his new home.

The letter is as follows:—"To Bibeya from Gimil-Marduk: May Shamash and Marduk grant thee, for my sake, to live forever. I write this to inquire after thy health. Let me know how it goes with thee. I am now settled in Babylon, but I am in great anxiety because I have not seen thee. Send news when thou wilt come, that I may rejoice at it. Come in the month of Arakhsama (November-December). Mayest thou, for my sake, live for ever." The toothache cure is: "So must thou say this: 'O worm, may Ea smite thee with the might of his fist.' Thou shouldst then do the following: Mix beer, the plant sa-kil-bar, and oil together. Repeat thereon the incantation thrice and put it on the tooth."—Christian Herald.

Identification of Criminals by the Teeth.—A whole band of burglars has been unmasked recently at Koenigs-Wusterhausen, Germany. A hard pear was found which one of the burglars had tried and thrown away. As the impression of the teeth showed an entirely abnormal position, all apprehended criminals were quietly watched, and it was soon possible by the position of his teeth to charge one criminal downright with participation in the crime. The burglar was so astounded that he not only confessed, but gave the names of his three companions. This incident again goes to emphasize the importance of the dento-legal expert.—Lewinski, Deutsche Zahnarztliche Wochenschrift.

Restoration of the Lingual Wall of the Upper First Bicuspid by the Use of a Post and Gold Inlay.—In the following, a practical substitute for a gold or Richmond crown is suggested. Since

the upper first bicuspid is very liable to fracture after devitalization, owing to its deep sulcate groove, it has been found advisable in several instances to use this method. A flat base is obtained with the remaining wall parallel or slightly inclined toward the buccal side. The lingual root is prepared with a fissure bur one-half millimetre larger than the platinum post. A wax model is made as for an ordinary gold inlay, with the post in position; this is removed with the post. The post is then removed from the wax, and that portion which belongs into the model is encased in platinum foil, heated moderately, and replaced. The model is again adapted to the cavity so as to be sure of the correct position of the post. The piece is then invested and cast. The post is removed from the inlay and fixed either with cement or amalgam, and the inlay once more tried in the cavity before final seating.—J. S. Ashbrook, Dental Summary.

Offensive Breath.—If a dentist could get the odour of his own breath, he would realize more fully what his patients at times have to endure. Coming as closely in contact with people as he does, the dentist should use the utmost care in keeping his breath sweet. While keeping his mouth in as sanitary a condition as possible is essential, it is not all he should do to control the odour of the breath. Diet is one of the most important things to care for. A person who eats much meat will almost invariably possess an offensive breath. Pay attention to your diet, eat in moderation, keep the bowels freed from products of decomposition, drink a copious amount of water each day, and this, in addition to the regular mouth toilet and frequent use of a non-irritating and delicately flavoured mouth-wash, will do much toward controlling an otherwise offensive breath.—Dental Record.

Removal of Amalgam Fillings.—If for some reason an amalgam filling is to be removed, an old instrument which has been ground to a fine blunt end is strongly heated, and forced into the amalgam as deeply as possible. If necessary, this operation is repeated. As soon as the patient declares that his tooth feels hot, quickly bur the amalgam, which comes off as easily as gutta-percha.—Laboratoire et Progres Dentaire.

Amalgams.—Mercury is well known to be the only metal which is liquid at the ordinary temperature of the atmosphere. The best mercury is crystalline in character, and of a silver-white colour, freezing at -40° F. (4.5° C.) and boiling at 662° F. (350° C.).

When compounded with other metals it forms alloys whose properties differ greatly according to the nature of the metals used.

In most cases the amalgams are at first liquid, and afterwards become crystalline, any mercury in excess being separated.

The amalgams offer an excellent opportunity for studying the behaviour of the metals towards each other, the low temperature at which these compounds are formed making the examination easy. If a metal is dissolved in mercury with an excess of the latter, a crystalline compound will soon separate from the originally liquid mass. This is the amalgam, whose proportions can be expressed according to fixed atomic weights, and easily obtained by removing the excess of mercury by pressure.

Many amalgams are at first so soft that they can be kneaded in the hand like wax; but become hard and crystalline in time.

These are especially adapted for filling teeth, and much used for that purpose. Before the action of the galvanic current upon metallic solutions was known, by means of which certain metals can be separated in a pure state from solutions, and deposited upon a given surface, the amalgams were of great importance in gilding and silvering.

The article was coated with the amalgam, and the mercury volatilized by heat, the gold or silver remaining upon the surface as an adherent coat.

The chemical affinity of other metals for mercury varies greatly; many combine with it very easily, others with such difficulty that an amalgam can only be obtained in a roundabout manner.

Amalgams are of great interest theoretically, and important to a general knowledge of alloys, but only a limited number are actually employed in the industries.—Hopkins's *Cyclopædia of Formulas*.

TRIKRESOL-FORMALIN

SOLUTION AND PASTE

(Dr. J. P. BUCKLEY'S Formula.)

DIRECTIONS FOR USE.

1.—In Teeth with Gangrenous Pulps, open up the cavity and clear out the canal or canals. Soak one or more cotton pellets in the Trikresol-Formalin Solution, insert in the canal or canals, and securely seal the cavity with Fletcher's Artificial Dentine to make it perfectly air-tight.

After one or two days remove the cotton pellets, wash out the canal or canals and cavity with a 3 per cent. solution of Carbolic Acid, and then thoroughly clean and dry out.

Now flow a drop of the Trikresol-Formalin Solution in the canal, or in each canal if more than one, fill the canal or canals with Trikresol-Formalin Paste, and proceed with and complete the permanent filling.

2.—Trouble subsequent to Root Treatment. When inflammation with swelling and pain develops in teeth, the roots of which have been long previously treated, and trephining has to be resorted to, they should be left open under Trikresol-Formalin Dressings for a few days; the treatment described above, under No. 1, can then be completed in two sittings.

3.—Pulp Amputation and Nerve Extraction. In cases of pulp amputation and nerve extraction insert in the canal a cotton pellet soaked in Trikresol-Formalin Solution, seal air-tight with Fletcher's Artificial Dentine, leave for a few days, then remove, flow a drop of Trikresol-Formalin Solution in the canal, fill it up with Trikresol-Formalin Paste, and insert the permanent filling upon it.

4.—Gangerous Pulp and Fistula. Should a gangerous pulp be accompanied with a fistula, Dr. Buckley opens the fistula, drains off the pus, inserts cotton pellets soaked in Trikresol-Formalin Solution and seals perfectly air-tight with Fletcher's Artificial Dentine. If necessary the treatment is repeated several times. The final stages of the work are carried out as described above under No. 1.

The most successful results are obtained when the above directions are faithfully followind.

Large package.....\$1.25 per box.



ASH'S INLAY AND CROWN CEMENT

GREATLY IMPROVED

(Oxyphosphate of Zinc.)

Features—Extra Tenacious; Extremely Dense; Very Durable; Non-Expanding; Highly Resistant to the Fluids of the Mouth.

One of the wants experienced by the Inlay and Crown worker is a reliable and enduring cement, which can be depended upon to retain Inlays and Crowns in position for an indefinite time.

Ash's Inlay and Crown Cement meets the need, and possesses all the features enumerated above. The powder is very finely ground, it is easily mixed with the liquid, and forms a cement which practically does not expand during crystallization. It is thus free from an objection which is present in most oxyphosphate cements that are used for setting Inlays and Crowns, viz., expanding during crystallization, with the result that the bite is raised in the case of a Crown and the fit is disturbed in the case of an Inlay.

Directions for Use.

Put a small quantity of the Liquid on a clean glass slab, place enough Powder near it, but not in it, mix the two together by drawing a little Powder at a time into the Liquid with a spatula, until it is of the consistency of milk. In this condition it is suitable for setting an Inlay. (The Inlay should be smeared with a camel hair pencil dipped in the Cement, and then the cavity should also be smeared so as to obtain the junction of cement with cement.) For setting Crowns, the Cement should be mixed to the consistency of putty.

Supplied in the following shades:—

White, Pale Yellow, Yellow, Pearl Grey.

One-shade packet, any shade . . . per packet \$1.25 6 pks. for \$ 6.00
Four-shade packet per packet 3.00 6 pks. for 15.00

Ash's Globe Copper Amalgam

(From the formula of Profs. W. D. Miller and Jung.)

Alloyed with $2\frac{1}{2}$ per cent. of Tin. Recommended for colour, setting properties, and hardness.

This amalgam of Copper and Tin is the outcome of many experiments on the part of the above-mentioned eminent Professors Miller and Jung.

Price.....per oz. \$1.00

In 6-oz. lots.....per lot 5.00

At the time of its introduction Professor Miller in an exhaustive paper describing the experiments (Cor. Blatt., Apr., '94), said that the addition of tin in these proportions, viz., $2\frac{1}{2}$ to 3%, was clearly proved to have the effect of lessening the chemical dissolution of the copper in the fluids of the mouth. Further, that it favourably affected the colour of the fillings, which remained grey in contrast to the black of the copper amalgams without tin. Extensive experiments for detection of shrinkage were carried out, and we have evidence from Germany, where it has been largely used since 1893, to show that in actual practice the conclusions drawn from the experiments as to its value as a filling material have been confirmed.

DIRECTIONS FOR USE.

Heat the Amalgam in a ladle until beads of mercury ooze out, crush it thoroughly in a mortar, knead well together in the hands, and use at once.

STOVAINE

(Registered).

AN IDEAL ANÆSTHETIC FOR USE IN SURGICAL AND
DENTAL PRACTICE.

Guaranteed not to contain Cocaine.

Do not fail to try it.

STOVAINE is pure Chlorhydrate of Amyleine. It is administered hypodermically like cocaine; its anaesthetic action is equal to that of cocaine; it is much less toxic than cocaine; it exerts a tonic action on the heart; in a word, it possesses all the advantages of cocaine without any of its dangers.

STOVAINE has a wide range of application, and is being very extensively used by surgeons and dentists all over Europe and in the United States and Canada with the greatest success and satisfaction.

The most convenient and popular form in which Stovaine is put up is a 1 per cent. Solution in Oil of Eucalyptus, Oil of Wintergreen, Boric Acid, Glycerine, Tincture of Rosemary, Thymol, Oil of Peppermint, Benzoic Acid, Carolic Acid .05 per cent., and Alcohol.

Price, in 2-oz. bottles.....per bottle \$1.25

NOTE.—To obtain the best results with Stovaine, it is necessary TO KEEP STRICTLY TO THE TIME recommended by the manufacturers, viz., TWO minutes after injection. When the Operator has finished injecting, he should look at his watch, and as soon as TWO MINUTES have elapsed he should at once proceed with the extraction of the tooth or teeth.

Claudius Ash, Sons & Co., Limited

Ash's Gum Pink Light Rubber

Gives the closest reproduction of the natural gum of any Dental Rubber. While it has been extensively copied it has never been done successfully. Should any salesman tell you that another brand is "just as good as Ash's," use your own judgment.

It has been before you years out of number and has never yet failed you. Does it pay to experiment? We have done all that for you and the result is known the world over.

Price per pound.....	\$ 6.00
Price per 5 pounds.....	27.00
Price per 10 pounds.....	50.00
Price per 20 pounds.....	95.00

Direct or through your dealer.

Claudius Ash, Sons & Co., Limited

Ash's Dental Rubbers

The sale of Ash's Rubber, both for base and coating, during the past six months has been greater in Canada than ever before. This, in view of the fact that there are many lower priced rubbers offered to the dental profession, shows that the high standard of our rubber is appreciated. Not only is the excellent quality maintained, but the standard of weight also.

It is well to be on your guard respecting the weight, as some rubbers are weighed with the heavy linen backing, and in such instances your loss is about 20 per cent. We are the oldest and largest manufacturers of Dental Rubber, and our product is the standard by which all others are judged. Specify Ash's Rubbers, and so provide against failure and disappointment.

Claudius Ash, Sons & Co., Limited

Ash's Dental Rubbers

Are the best in the World, and are the standard by which all others are judged.

NOTE.—Our Rubbers weigh 16 ozs. to the pound, exclusive of linen backing and box.

FOR COATING

	Per lb.	5-lb. lots	10-lb. lots	20-lb. lots
New Pink, Medium.....	\$6.00	\$5.40	\$5.00	\$4.75
No. 1X Pink, Medium.....				
No. 1 Pink, Light.....				
Gum Pink, Medium.....				
Gum Pink, Light.....	5.00	4.50	4.25	4.00
No. 2X Pink, Medium.....				
English Pink, Medium.....				
English Pink, Light.....				

FOR BASE

Improved Black.....	4 50	4.05
Combination.....		
White for Side Blocks, etc.....		
Child's "G".....		
A. E. Elastic, Dark Brown.....	4.00	3.60
W. Elastic, Dark Brown.....		
Whalebone No. 1, Dark Brown.....		
Whalebone No. 2, Light Brown.....		
Solid Base.....	3.50	3.15
Dark Red.....		
Flexible Base.....		
Dark Elastic.....		
Maroon.....	3.00	2.70
Red.....		
Orange.....		
Dark Brown.....		
Brown.....		
English Base.....		

SPECIAL—FOR TENDER GUMS, ETC.

	Degree Fahrenheit	Time	lb.
Soft Pink, for lining Palates.....	310	1 15	\$6.00
Soft Dark Red.....	310	1 15	4.50
Vela for Artificial Palates.....	270	6 0	6.00
Brown Weighted.....			4.25
Pink Weighted.....			6.00
Brown Repairing.....			4 50
Pink Repairing.....			6.00

NOTE.—Cash Discounts do not apply on quantity rates on our Coating Rubbers in any quantity over 5 lbs.

CLAUDIUS ASH, SONS & CO., Limited

Ash's Dark Elastic Rubber

Purest and Strongest.

To obtain the best results with this product bear in mind that it is all "Pure Para" and contains no colouring matter whatever. It is necessary, therefore, in vulcanization to advance the heat very slowly and vulcanize for at least one and one-half hours.

There are imitations of this rubber offered to the profession, some going even to the extreme of copying the name "Dark Elastic." Refuse these imitations, as if Ash & Sons' name is not on the box and linen back the product is not ours.

Price per pound.....\$ 3.50

Price per 5 pounds..... 15.75

Direct or through your dealer.

Claudius Ash, Sons & Co., Limited

Stent's Composition

ATTEMPTS have been made to imitate Stent's Compound; even the color of the Container, and the label have been copied, for the purpose of deceiving the unwary. Every cake of the **Original Genuine** Stent's Composition bears the Trade Mark, which consists of the single word

STENT'S

Without Initials of any kind and the outlines of two **Impression Trays**, also the label on every box bears this signature:

C. A. & C. Stent.

SOLE OWNERS OF THE ORIGINAL FORMULA—

Claudius Ash, Sons & Co., Limited

New Prices for Stent's Impression Compound

Per Box	.45
6 Boxes	2.50
12 Boxes	4.50
20 Boxes	7.20

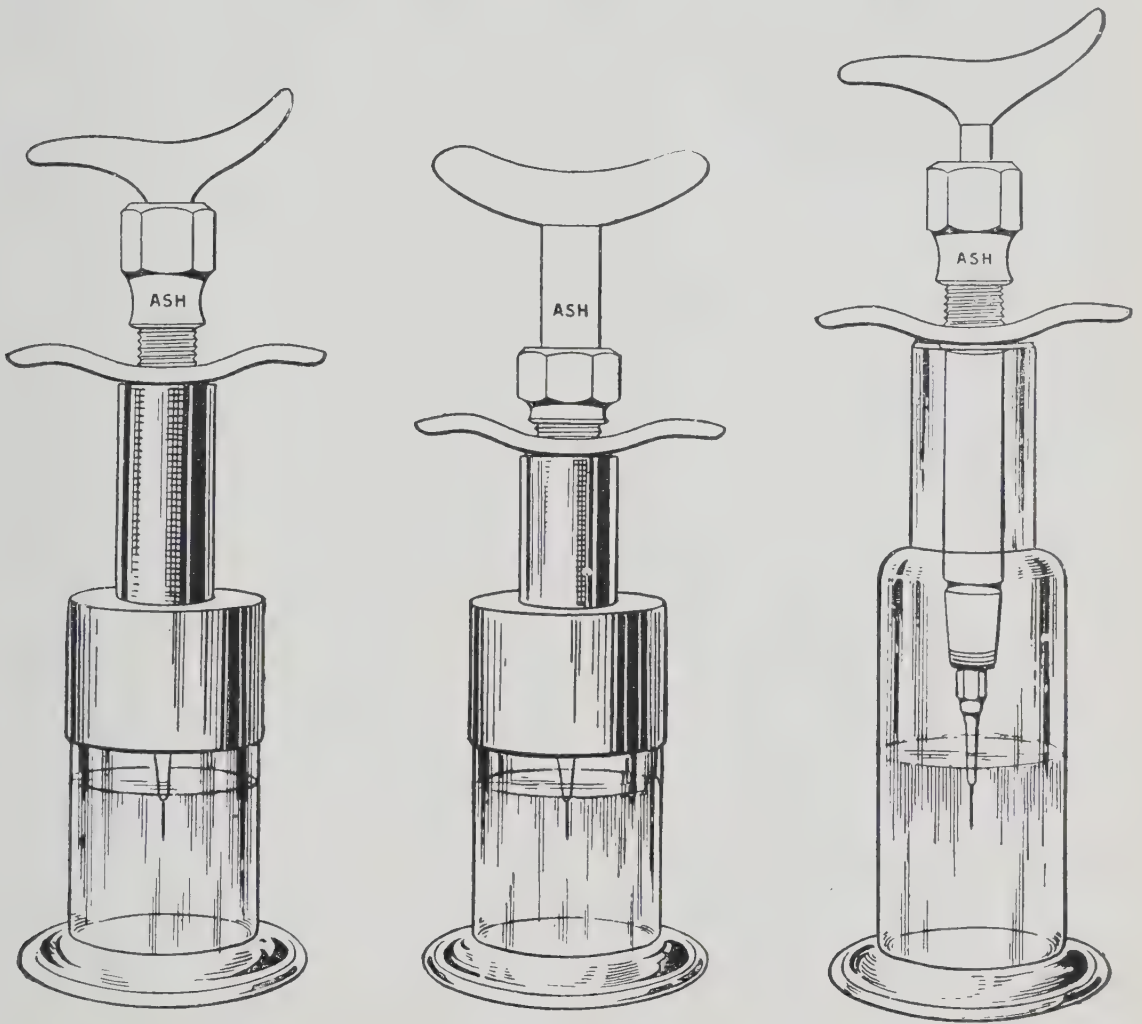
This Compound is the most reliable on the market, and has stood the test of time. If you have not used it, send us a request postal for a sample.

Claudius Ash, Sons & Co., Limited

Save Your Hypodermic Needles

Nothing aggravates the Dentist much more than to take up his Syringe after his last operation and find it *plugged*. He finds that he has laid it down after using and it has quickly rusted. His time is too valuable to waste drying the needle out. All this annoyance is saved by the

Bardet Syringe Sterilizer



Keep your needle on your Syringe in the Sterilizer immersed in Lysol. Your needle will never rust, is kept in a sterile solution, is always ready to hand and looks well on your table.

In neat Cardboard Boxes for Mailing, 60c. Each.

CLAUDIUS ASH, SONS & CO., Limited

GLOBE PYORRHOEA SCALERS

SET OF SIX DOUBLE ENDED



In Knurled Handles, Nickel-plated, each 50c.

Per Set \$2 50

Porcelain Tray

Divided Down the Middle. For Long-Handled Instruments.



The two small sizes of Porcelain Trays for small instruments and useful sundries have been so favorably received by the Profession that we have decided to add the size here illustrated to our stock for long-handled instruments.

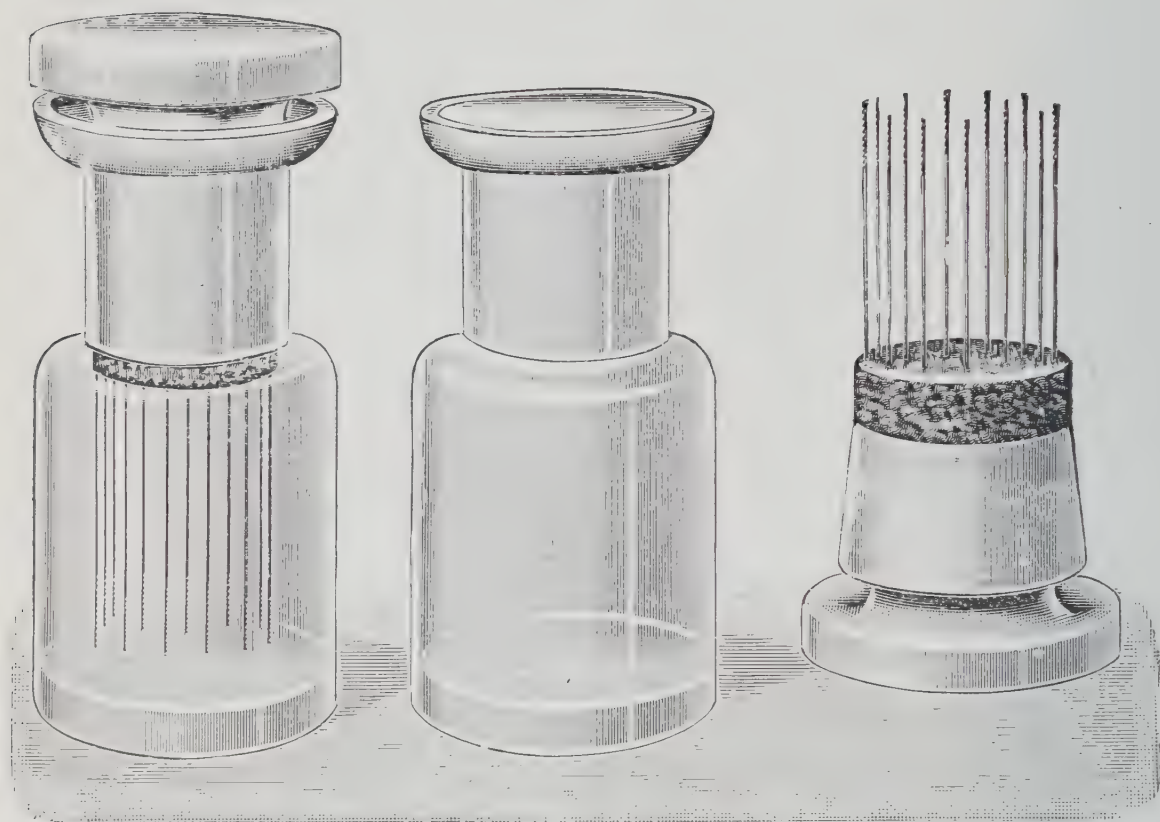
It is made to fit the drawer of Allan's Bracket Table, the outside dimensions being $7\frac{3}{4}$ in. long by $4\frac{3}{4}$ in. wide by $\frac{3}{4}$ in. deep, but it can be lifted out of the drawer if desired and used in any situation most convenient to the operator.

It is perfectly aseptic, and practically equal to new each time it is cleaned.

Price.....each 35 Cents

Claudius Ash, Sons & Co., Limited

Bottles for Nerve Instruments



These Bottles are labelled respectively Sterilizing Fluid and Alcohol. There is no better method of keeping Nerve Broaches, and they make a handsome adjunct to your cabinet. Your instruments are always kept in a sterile solution, and if Lysol is used your Broaches will never rust.

Set of two Bottles in Cardboard Case, 80 Cents.

Claudius Ash, Sons & Co., Limited

A Popular Priced Wax

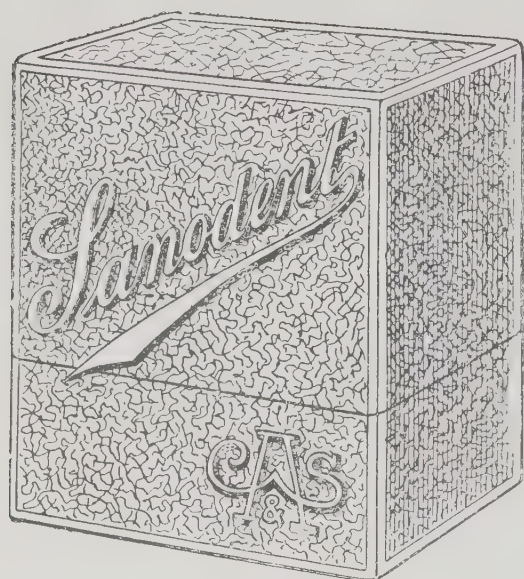
IS IN GREAT DEMAND

The large sale for our ENGLISH WAXES bears testimony to their great value.

No. 3, Pink	-	-	-	per lb.	.75
" 2, "	-	-	-	"	.80
" 1, "	-	-	-	"	.90
Brown for Base	-	-		"	.85
Extra Tough Pink	-	-		"	1.00
" " "		-		"	1.25
" " Yellow		-		"	1.00
Black for Inlays in fine sticks, per box					.35

Send us that MAIL ORDER, or ask one of our many travellers to supply you.

Claudius Ash, Sons & Co., Limited



Sanodent

(Registered)

A Superior Root Dressing

FROM THE FORMULA OF
MR. C. R. FITCH, L.D.S., Eng.

Sanodent has been regularly used and well tested for nearly four years with the most satisfactory results, hence it is offered to the Profession as a thoroughly reliable preparation

DIRECTIONS FOR USE.

AS A DRESSING FOR SEPTIC OR ABSCESSSED TEETH.—Thoroughly clean out the contents of the Pulp Chamber and Root Canals in the usual manner. Mix the Sanodent Powder and Liquid to the consistency of thick cream and apply on Cotton Wool to the Root Canals and Pulp Chamber. Repeat these dressings until the tooth is perfectly “sweet.” Then permanently fill the Canals with either Asbestos Fibre, Gutta Percha Points, or Cotton-Wool covered with Sanodent mixed to a fairly thick paste.

In very septic teeth, which at the time of treatment are not abscessed, it is advisable at the first to clear out the contents of the Pulp Chamber only, apply a dressing of Sanodent, and leave the treatment of the Canals until a subsequent visit, when their contents will be far less septic.

SOME OTHER USES.—In those cases in which for some reason or other (*e.g.*, Tortuous Canals), it is impossible to clear out the Canals thoroughly, cover the orifices of these Canals with Sanodent mixed to a paste, and carried to place on Asbestos Fibre or Cotton Wool. Any remaining Pulp will be preserved in an antiseptic condition.

As a “Mummifying” agent, those who practice “Mummification of the Pulp” will find Sanodent excellent. Subsequent to devitalising and removing the coronal portion of the Pulp, apply Sanodent, mixed to a paste, on either Asbestos Fibre or Cotton Wool.

After the application of Arsenic, a dressing of Sanodent left on for a day, prior to attempting the removal of the Pulp, will render the pulp tough and thus admit of its being much more easily removed whole from the Canals.

Sanodent is very useful as a permanent Root-Canal Filling when it is mixed to a paste and used in conjunction with Asbestos Fibre, Gutta Percha Points, or Cotton-Wool.

N.B.—Do not force Sanodent through Apical Foramina, and do not seal it in contract with living tissue, either pulp or gum. Sanodent is not intended to replace proper Root Treatment, but to aid it.

Sanodent is supplied in stoppered bottles. The bottles should be kept well closed when they are not in use. After exposure to light and air the liquid becomes somewhat darker in color than as supplied, but this is no detriment to it, and in no way affects its efficacy.

Sanodent Powder and Liquid in Packets, per packet..... \$1.25

CLAUDIUS ASH, SONS & CO., Limited

BORITH

An excellent preparation to recommend your patients for cleansing Dentures. It is a thoroughly reliable preparation.

Price - - \$2.00 Dozen

ZIMO

The best obtundent on the market for the painless extraction of teeth and minor surgery; Antiseptic and Germicidal. Can be used in all cases; safe and effectual. No bad after effects. Once used, always used. "ZIMO is a great practice builder," as everyone says who has used it. 4 oz. bottle, \$1.00; 6 bottles, \$5.00. Every bottle guaranteed. Try a bottle; if not all right send it back and get your money.

Manufactured and put up by

DR. S. T. WHITNEY

ST. STEPHEN, N.B. . . CANADA

General Agents:

CLAUDIUS ASH, SONS & CO., Limited

11-13 Grenville Street, Toronto, Ont.

NOVOCAIN

FOR THE

Painless Extraction of Teeth

**One of the Safest and Most Powerful
of Local Anaesthetics**

**ABSOLUTELY NON-IRRITANT
SCIENTIFICALLY PREPARED
UNATTENDED BY AFTER-EFFECTS**

TABLETS.—NOVOCAIN IS PREPARED IN
TABLET FORM—KNOWN AS

Dental Novocain-Suprarenin Tablets

Put up in Tubes, 20 Tablets in each Tube
Per Tube - - 50 Cents

These Tablets yield uniformly excellent results: a fresh reliable solution can at all times be made from them; and they are giving the greatest satisfaction to all Dentists who are using them.

Claudius Ash, Sons & Co., Limited

PRACTISES FOR SALE AND HELP WANTED

- FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350
- FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -
- FOR SALE—Dental Practice. Cobourg. Apply Ash & Sons 500

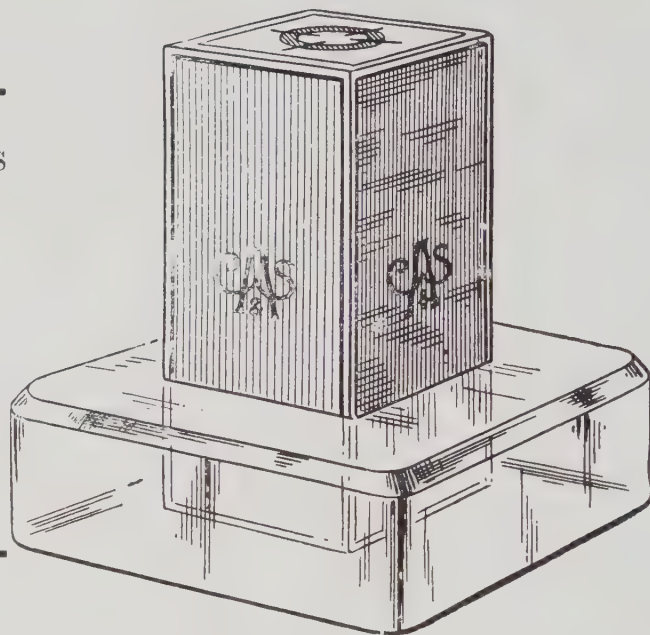
WANTED—A Graduated Assistant for all-round work. Must have experience and be sober. Apply C. Ash & Sons.

SECOND-HAND GOODS

- | | | |
|---|---------|-------|
| I New Model Wilkerson Chair, A-1 condition | - - | \$160 |
| I S.S.W. Pattern Chair, Leg Base | - - - - | 30 |
| I Case Harvard Chair | - - - - | 20 |
| I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new | - - - - | 60 |
| I Davis Gasometer, less Face Piece and Tubing, excellent condition | - - - - | 18 |
| I Wetherby Suction Machine (new style), in A-1 condition | | 25 |
| I Pelton Porcelain Furnace, A-1 condition | - - - | 25 |
| I Davis Gasometer | | |
| I Mills Centrifugal Casting Outfit | - - - - | 25 |
| I Olivian Swager | | |
| I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler | - - - - | 12 |
| I Electro Dental All Cord, Bracket Engine, 110 Volts, 60 Cycles alternating with hand pieces. Perfect condition | - | 80 |
| I Clark Regular Double Bowl Cuspidor. A-1 condition | - | 30 |
| I Ash Long Range Chair. A-1 condition | - - - | 125 |
| I S.S.W. Leg Base Oil Chair | | |
| I Golden Oak Clark Cabinet | - - - - | 75 |
| I S.S.W. Metal Fountain Cuspidor | | |
| I Leighton-Jackes Switch Board. Onyx Face and Shelf. Nearly new. Perfect condition. 110 Volts. 60 Cycles alternating. Price including Electro Dental H.A. Syringe | | 100 |

Ash's Cardboard Cartons

To fit Ash's
or other
makes of
Metal or
Glass
Bases



Per pack-
age of 50,
50 cents

The Glass separately sells for 40 cents

Claudius Ash, Sons & Co., Limited

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

AFTER HOURS N. 4284

The Tooth of Service at Your Service

KAZAN TEETH

Are made by Johnson & Lund, of their famous high-fusing Porcelain, which has been favorably known by the profession for over half a century.

KAZAN PINS are double-headed and are fused into the porcelain—the one reliable method of attachment. KAZAN PINS are stronger than platinum, and of a size to render the maximum of service.

KAZAN TEETH are furnished in a great variety of shades, and a perfect assortment of molds, including natural forms for anatomical articulation.

Per Tooth, Gum or Plain.....	\$ 0.10
Per Set of 14	1.00
12 Sets of 14	10.22
30 Sets of 14	24.90
63 Sets of 14	50.40
130 Sets of 14	100.10

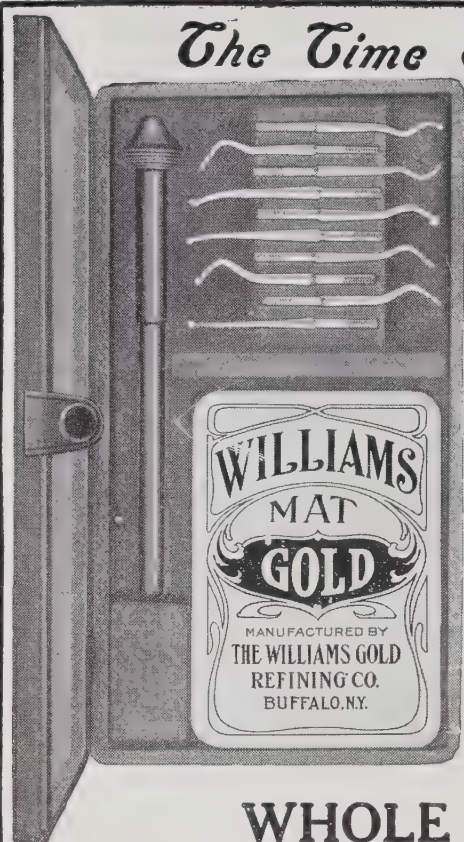
SUBJECT TO USUAL CASH DISCOUNTS

Claudius Ash, Sons & Co., Limited

SOLE AGENTS FOR CANADA

The Time Saver in Dentistry

Are You Using the Universal Filling Gold ?



INTRODUCTORY PACKAGE

10 Pluggers	\$5.00
1 Handle	1.00
1-8 Oz. Gold	5.00
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**For INFANTS, INVALIDS,
the AGED and TRAVELERS**

— IN TYPHOID FEVER —

Pure, rich milk combined with an extract of malted grain, highly concentrated, partially pre-digested, palatable, and readily assimilated, makes **HORLICK'S Malted Milk** the physician's first choice when selecting a reliable nutriment in the treatment of Typhoid and other low fevers.

HORLICK'S Malted Milk has proved invaluable for many years past in the various diseases and conditions in which a complete, well-balanced diet is of vital importance.

A glassfull, taken hot upon retiring, proves an excellent "Night Cap" for the physician, when tired out or "chilled through."

Samples sent, free and perpaid, to the profession, upon request.

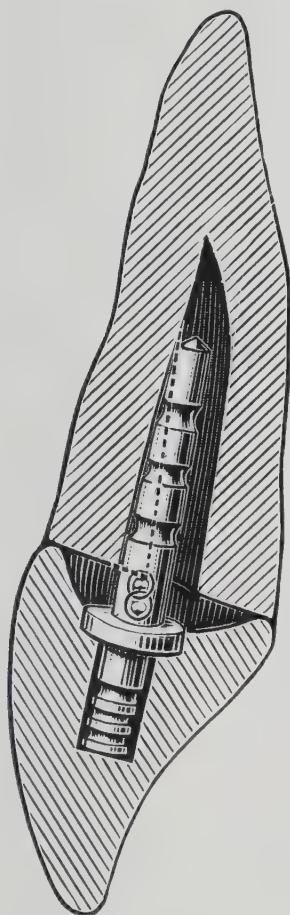
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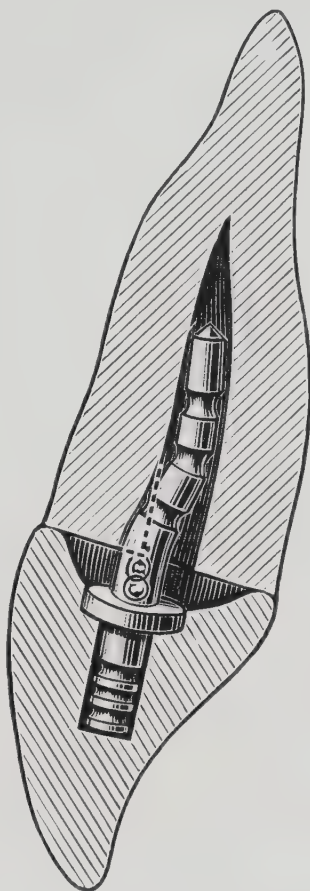
The New OFFSET Davis Crown Pin

Patented

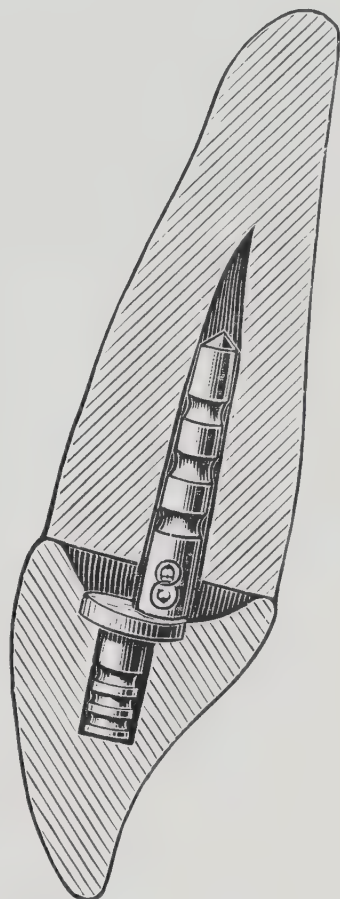
For such roots where a straight pin does not permit natural alignment of the crown with the root.



Root canal unnecessarily enlarged by using a straight pin.



Root canal unnecessarily enlarged by using a bent pin.



The OFFSET pin, showing how it permits a perfect setting of the crown without sacrificing the root in cases like the foregoing.

Three sizes: Small, Medium and Large

Price 10c. each

For sale by leading dental dealers.

CONSOLIDATED  DENTAL MFG. CO.

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One Hundred Per Cent

IN our entire experience in the dental business, we have never before heard of any commodity that came up to the fullest expectations of 100% of the users thereof.

TRANSLUCIN AND LITHOS are the exceptions to the rule.

TRANSLUCIN is a silicate cement. LITHOS is an oxyphosphate of zinc cement.

TRANSLUCIN. No matter if you have failed with others or are satisfied with the silicate you are using, you will like TRANSLUCIN better. It is more translucent than any other silicate, and is extremely adhesive. Its edge strength is nothing short of marvelous.

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TRANSLUCIN comes in \$3.00, \$4.50, \$11.00 and \$15.00 packages

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Twelve shades each.

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Specialists in removable and semi-removable bridge work.

Griswold, Morgan, Roach
Bennett Bar, Fossum
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Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

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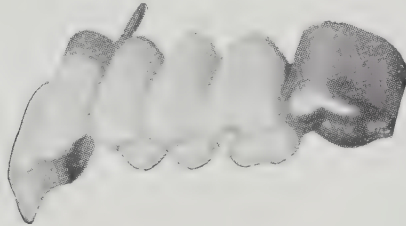
Chas. L. Daly

X. L. C. R. Dental Laboratory

**ROOMS, 1, 2, 3, 4 & 5,
11 GRENVILLE STREET
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"Send good Plaster Impressions and correct wax bite and leave the rest to me"— *C. L. Daly*



The above cut illustrates the Dimelow Detachable Facings at **\$2.75** per Tooth, all porcelain posteriors

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Molars - - - - \$2.25 to \$2.50	Swaging metal plates (swaging only) Aluminium - - - \$3.00
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Bicuspid Dummies - - - \$2.50	Gold Plates - - - - \$6.00
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Steele Detachable Porcelain Cups	Send impressions (unpoured) plaster preferred, for all classes of work including metal work.
Teeth included - - - \$2.75	
Facings charged extra at market price.	
Gold Inlays (Send wax impression packed in tissue paper)	
Casting only - - - - .75	
Gold - - - - .05 per gr.	

SEND A TRIAL ORDER.

SATISFACTION GUARANTEED

When you write, give full particulars of case and when wanted.
You will not be disappointed.

CHARLES L. DALY

Thirty Thousand Dentists Are Using



And yet it has been on the market
but four months.

Are you one of this Thirty Thousand?
If not, would you like a sample? It is
yours for the asking.

Shades, Light and Dark

Per Package \$1.00

The L. D. Caulk Company

Laboratories : Milford, Del.

Philadelphia, Pa., U.S.A.

Strips and Disks that Cut Wet or Dry and that Last

Paper disks and linen strips will not hold their own under moisture. Celluloid is not affected by it. Linen strips are rough and uneven; celluloid strips are not.

CAULK'S CELLULOID STRIPS AND DISKS

(Abrasive)

are made of celluloid, coated with ITALIAN GARNET, which is harder than any other sand. Therefore, they cut more rapidly and with less pressure than the ordinary strips and disks. A GREAT ADVANTAGE is that they may be used WET as well as DRY, and will, consequently, do more work than any other strips or disks made.

Made in various sizes and grits.

Strips, Box of 100	....	75 cents
Disks, Box of 100	....	.... 20 cents

Manufactured by

THE L. D. CAULK COMPANY

Laboratories, Milford, Delaware

DO YOU SAY "Use some good tooth paste or mouth wash" in reply to the question "What shall I use?" and leave it to your patient to *guess which one would prove most effective* in maintaining clean teeth and mouth health?

DO YOU HAND OUT a free sample of *whatever dentifrice happens to be nearest at hand* and thus practically endorse a preparation, concerning which your information is limited to the facts that *it is claimed to be meritorious; it tastes good, and its samples are free?*

PATIENTS are entitled to information and *advice that is the result of careful investigation*; such advice is the kind they are looking for and appreciate when given to them.

PYORRHOCIDE

(formula published)

the antiseptic, detergent and prophylactic tooth powder is NOT ADVERTISED TO THE PUBLIC but is now prescribed and recommended for patients' use by those progressive members of the dental and medical professions who appreciate the advantages of ORAL SANITATION and have been OPEN TO CONVICTION. DENTINOL (applied by the dentist) and PYORRHOCIDE (used by the patient) is the ONLY PYORRHOEA TREATMENT ever demonstrated to the profession, through the maintenance of FREE PYORRHOEA CLINICS for that purpose.

IT IS THUS PROVED that Pyorrhoea Alveolaris (Riggs' disease) can in practically all cases be cured and its recurrence prevented; also that *loose teeth* can, when sufficient bony process remains, be tightened.

DENTISTS IN EVERY COMMUNITY are using our treatment with marked success in establishing mouth health and are prescribing PYORRHOCIDE for general use as a prophylactic tooth powder, because *they know that the claims made in behalf of the preparation are substantiated by actual performance.*

FOR ETHICAL REASONS we do not publish testimonials but will be pleased to send, upon request, literature dealing with the subject of pyorrhoea treatment together with reprints of articles by prominent dentists, as taken from recognized leading dental journals.

A four-ounce can of Pyorrhocide at \$1.00 will outlast the quantity of ordinary pastes, powders or washes obtainable for the same money—it is thus economical as well as most effective. Pyorrhocide may be prescribed through ALL DENTAL SUPPLY HOUSES or any first-class druggist.

The Dentinol & Pyorrhocide Co.

1 Union Square W.,

New York City, U.S.A.

THE REPUTATION OF **JUSTI'S TEETH** IS UNDISPUTED

YOU are Protected by this Reputation.

Protection in its Strongest sense means
Security.

This Security You Feel when you Tell Your
Patient that **YOU** Use **JUSTI'S** Teeth.

It means Satisfied Patients also a Personal
Feeling of Satisfaction that You are
Giving Them the Best that can be
procured.

This suggests to you the Reason Why

JUSTI'S TEETH

should be selected for your next case.

*If your Dealer cannot supply
you, order direct from us.*

H. D. JUSTI & SON

Philadelphia

Chicago

The Weber New Model

== \$50.00 ==

WE have no smooth talk to present, just an offer to place a WEBER Fountain Cuspidor in your office for a test, subject to your own conditions, and leave the verdict to you. This offer is based on results, not theory, as the Spittoon will go in on a basis of make good or get out.

Order one through your Dealer NOW

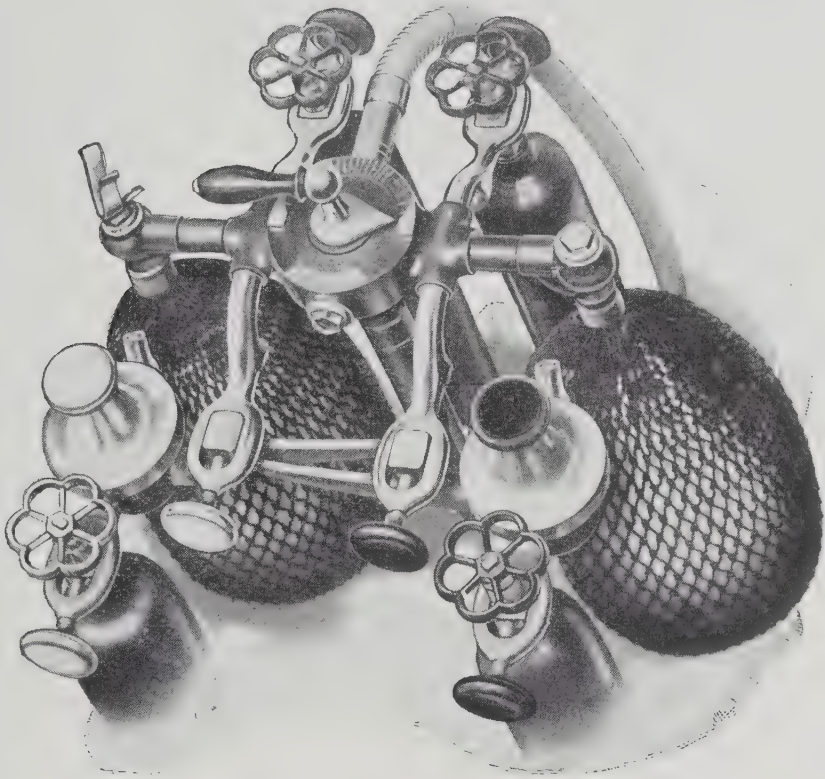
The Weber Dental Mfg. Co.
CANTON, OHIO

The World's Largest Mfrs. of Fountain Spittoons.

Clark New Model Gas Apparatus

with

Detachable Pressure Regulators



Clark Detachable Regulators on Clark Apparatus

IF YOU WANT REGULATORS on your Gas Outfit, we have the CLARK DETACHABLE REGULATORS, the most SIMPLE--SENSITIVE and EFFICIENT Regulators on the market. Attached or detached in a few moments.

IMPORTANT--THE CLARK FEATURE--We supply these Regulators for one side only, as illustrated above. ONE SIDE IS LEFT FREE from any incumbrance, so that complete expansion and full volume of Oxygen can be procured instantaneously. SAFETY DEMANDS IT--HUMAN LIFE IS AT STAKE.

WRITE FOR OUR HANDSOME NEW CATALOG IN FOUR COLORS
JUST OFF THE PRESS

A. C. CLARK & CO. - - **Grand Crossing, Chicago**

Are you satisfied that the Alloy fillings you are now putting in are the best that can be made? We are sure they are not unless you are using



Absolutely no contraction
One 20000 of an inch expansion
Greatest edge strength known

Ask Your Dealer

We Know How

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OUR FIRST PRINCIPLE:

**To Produce Metallurgical Supplies of
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A SECONDARY BUSINESS CONSIDERATION:

**A Secondary Class to Meet Competitive
Market Conditions in Cheapness.**

Examples :

Our "Regular" Gold Solder, No. 18, is 16 karat quality
—contains 69 $\frac{1}{3}$ c of Pure Gold and sells at 85c. a dwt.

Some other makers of Solder in Canada supply an
article that by repeated analytical test in independent
laboratories, assays between 12 and 13 karat, contains
52 to 56 $\frac{1}{3}$ c of Pure Gold and sells at 80c. a dwt.

Your Choice:

69 $\frac{1}{3}$ c of Gold delicately
alloyed with purest of ele-
mental metals for 85c. a dwt.

OR

52c. to 56 $\frac{1}{3}$ c. of Gold with
extra Copper to maintain
color, lacking technical super-
vision, for 80c. a dwt.

Highest Quality Jealously Guarded.

**The J.E. WILKINSON COMPANY,
LIMITED.**

The Better the Finish the Better the Work

¶ A crown or bridge with a fine finish is better than with a rough surface. The fine finish condenses the surface just enough to close the pores a little. It prevents the adhesion of deposits, resists better the attacks of chemicals contained in the food, is more welcome to the tissues, and is better in all ways.

¶ Such finish is now made easy for the dentist by the use of



Ney's Mirror Finished

Seamless Gold Shells de Luxe

in which we give a mirror finish to the gold during the process of manufacture. This finish condenses the gold of the surface, as you would do it by hand burnishing. This finish may be carried throughout the operations of crown or bridge making.

¶ Crowns made with these shells are of unequalled beauty and hygienic value.

PRICES

	1 dwt.	20 dwt.	100 dwt.
22K Dark or Light, 30G	\$1.07	\$1.02	\$1.01
22K Dark or Light, 28, 29, 31, 32G	1.09	1.04	1.03

Paper labels discontinued.

Shells stamped on the inside.

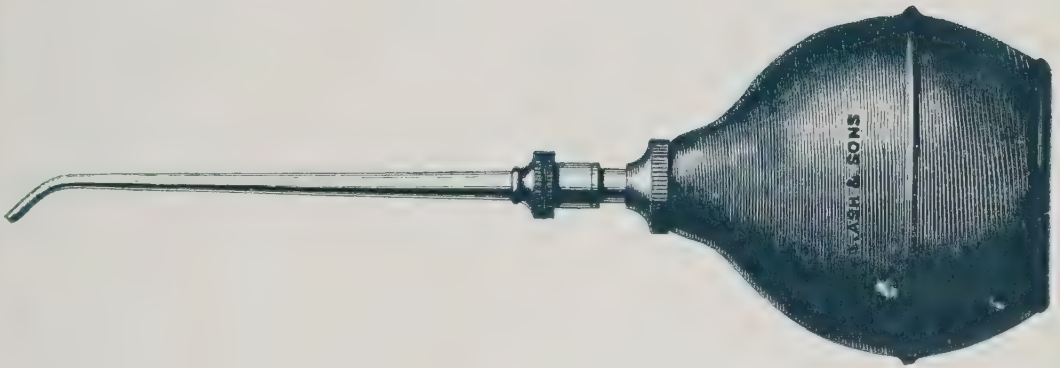
TWENTY-EIGHT SIZES.

FIVE LENGTHS.

Ask your dealer to show them to you---then ask us.

THE J. M. NEY COMPANY, Hartford, Conn., U. S. A.

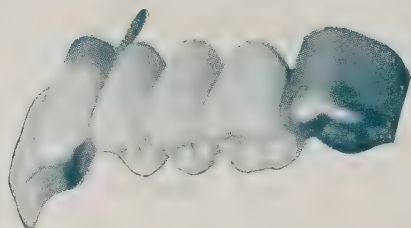
Ash's Fig. 2 Chip Syringe



This Chip Syringe has been so long and favourably known that that it needs no further description, other than to advise you that it is as well made as ever and will outlast all other kinds.

Price	-	-	-	85c.
Extra Bulls	-	-	-	65c.

Dimelow Detachable Facing



THE NEW TOOTH

Replaceable

Interchangeable

Gives the maximum of strength with the minimum of cost and labour.

The only replaceable tooth that can be satisfactorily tipped with gold.

Posteriors are made in both Veneers and all Porcelain forms.

Excellent moulds and shades of Johnson & Lund's well known bodies.

PRICES

Per Tooth	\$.25
108 Teeth	25.00
228 Assortment in Case	50.00
Staples for Anteriors	.05
Staples for Posteriors	.10

ALL STAPLES MADE OF GOLD, PLATINUM & SILVER IN THE FOLLOWING PROPORTIONS, 10, 20, & 70 PER CENT

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ASH'S CANADIAN MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

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CANADIAN BRANCH,

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LONDON, W. ENGLAND.







DIMELOW DETACHABLE FACINGS

Will give your patients better
service **THAN ANY OTHER**
DETACHABLE TOOTH. 

Just think of the security in
the case of a hard bite, of a
facing **WELL TIPPED WITH**
GOLD and **STRICTLY INTER-**
CHANGEABLE. 

Specify Dimelows for your next

— case. —

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AUGUST, 1913

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War Canoe, T. C. C.

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COURAGE is a virtue that the young cannot spare ; to lose it is to grow old before the time ; it is better to make a thousand mistakes and suffer a thousand reverses than to run away from the battle.

Henry Van Dyke



Ash's Canadian Monthly Circular

VOL. III.

TORONTO, AUGUST 1, 1913

No. 11

THE DENTIST IN OUR SCHOOLS.

The following, taken from the London Daily Mail, is a sign of the interest being taken by the public in the care of the teeth:—

In a paper read yesterday (May 13) before the European Orthodontia Society, which is now holding a conference in London, special emphasis was laid upon the importance of caring for the teeth of children. Both the health and beauty of the younger generation depend, it was pointed out, in large measure upon sound teeth. The author of the paper might have added that, from the military standpoint, good teeth are essential. Fifty recruits in every thousand, on the average, are rejected by the army for defective teeth alone. Moreover, as Professor Kirk, a distinguished American authority, has stated, experience shows that "dental disabilities are a cause of lowered physical and mental efficiency in children of school age, thus depreciating the value of the most important asset of the State in its future citizens." If only from financial and utilitarian considerations, every possible step should be taken to deal with disease of the teeth at its very beginning, and the necessity of strict cleanliness and the use of the tooth-brush should be taught in every school with the "three R's."

Both the British Admiralty and the British War Office have urged the importance of dental inspection in our schools, and a large amount of evidence showing how sorely it is required was given before the Physical Deterioration Committee some years ago. Happily our educational authorities are moving, though not perhaps with the energy that is to be desired. The London County Council has made an excellent beginning, and other education committees have inaugurated dental clinics. But the work has not been carried out with the same thoroughness and system as in the United States, where practically every school child is regularly examined and receives dental attention when it is needed. Again, in Germany a Central Committee for the care of teeth in the schools exists, and has been able to secure the inspection of more than 700,000 children annually. The question is one of ever-growing importance. Decay in the teeth is a disease which is increasing rapidly among

all civilized nations, and one of our greatest dentists last year pointed out that it is ten times as prevalent in our race as it was a century and a half ago. Nature, in fact, takes a cruel revenge upon the over-civilized.

Unless, then, the British race is to fall behind its competitors in health, comeliness and efficiency, the dentists must be called into our schools. Dental clinics are even more important than school baths. But both have this value, that they encourage that care for the personal appearance which is a virtue and a source of pride and strength. Both help to raise the standard of life and produce a type of manhood which, like the Greek ideal of old, is beautiful as well as strong and good.—The Daily Mail.

INTERNATIONAL DENTAL CONGRESS, 1914.

The Sixth International Dental Congress will be held in London from August 3rd to 8th, 1914, at the invitation of the British Dental Association.

His Majesty King George V. has graciously consented to be the patron of the congress, which will take place at the University of London and at the Imperial College of Science and Technology, South Kensington.

The president of the congress will be Mr. J. Howard Mumery, and the joint general secretaries are Mr. Norman G. Bennett and Mr. H. R. F. Brooks. Mr. H. Baldwin is honorary treasurer.

A Committee of Organization, under the presidency of Mr. W. B. Paterson (president of the International Dental Federation), with Mr. F. J. Pearce as honorary secretary, has been busily engaged for some time in making the preliminary arrangements.

Previous congresses have taken place in Paris (1889), Chicago (1893), Paris (1900), St. Louis (1904); and on the last occasion at Berlin, in the Reichstag, in 1909, when the German Emperor took a personal interest in the meeting, delegates attended from twenty different countries, and the Governments of many of them were officially represented.

Invitations are being issued to dental organizations throughout the world, and it is hoped thus to secure the co-operation of leading specialists and representative authorities in all branches of dental surgery.

The rules of the International Dental Congress provide that all ethical practitioners of dentistry possessing the qualification of the country in which they received their professional education, or of the country in which they practise, are eligible for membership.

The subscription for members of the congress will be 30s. (38 francs; 31 marks; 7½ dollars), and for members of their families accompanying them 15s. (19 francs; 15½ marks; 3¾ dollars).

The offices of the congress are 19 Hanover Square, London, W., to which address all communications should be sent.

MANY YEARS AGO.

Next time the dentist operates a diamond pointed drill in your jaw, holds a flarelight under the eaves of your mouth and ends up operations with a trip hammer, it may help you to endure the pain better to know that ancient inhabitants of Ecuador also had their teeth plugged and enameled, bridged and crowned, pivoted and rivetted.

Prof. Marshall S. Saville of Columbia University, who arrived in New York on the Carl Schurz, says so. He found several skulls in Ecuador with the teeth in even rows, decorated with gold, filled with gold on the inside, but showing only slightly on the outside and with gold bands stretched across the edges of the teeth, either to lengthen them or to decorate the mouth.

They had good dentists, too, Prof. Saville says. If one of the ancient Ecuadoreans could not afford to have his incisors plugged with gold, he had them filled with cement. These dentists were probably older than the Incas, the professor says.

The archaeologist once found skulls in Mexico, the teeth of which had been filled with stones, but these are the first gold fillings he has ever found among ancient skulls.

“It proves that these people were highly cultured,” said he.

The professor brought back remarkable examples of pottery, among them a miniature face and bust and a perfectly formed clay head of the size of an apple. One of the heads is so finely finished that it looks more like marble than clay.

“These early South Africans,” said the professor, “are the only very ancient people I know of who worked with jewels and platinum.” He said he saw a box dug out of a mound containing gold ornaments of great beauty. This is the archaeologist’s twenty-second trip of exploration in the tropics.—(From Toronto World.)

PRACTICAL POINTS.

Rauhe's Suction Disc.—In soldering a Rauhe's stud to a gold plate, use a flame large enough to heat the whole denture thoroughly, and this heat will do the soldering; a needle flame must not be used, as it will sweat the stud and cause disappointment.—C. Ash, Sons & Co.

Iodine as an Antidote for Carbolic Acid Poisoning.—Dilute tincture of iodine, which is applied on the skin after irritation by carbolic acid, can also be applied as an antidote in cases of carbolic acid poisoning. Tincture of iodine exercises a favorable influence on the mouth and œsophagus, and acts favorably even when toxic symptoms have already manifested themselves in the stomach and intestines. It probably forms a non-toxic iodized carbolic acid. Tincture of iodine may be considered superior to alkaline sulphates in these cases.—J. Maberly, Union Pharmaceutique, per *Revue Internationale de Prothèse Dentaire*.

Carborundum Points in Cavity Formation.—The use of the "knife-edge" carborundum in preparing the approximal surfaces is a great help, and, in fact, the use of carborundum points throughout the formation of the cavity renders the operation less painful to the patient, and more rapid than is the case when burs are used.—A. E. Webster, *Dominion Dental Journal*.

Public Dental Instruction.—There is probably no department of practical physiology so important in the rearing of children as that which pertains to the development and maintenance of their teeth. A judicious exposition of the principles which govern the development and decay of the teeth, if acted on by the masses, would probably do more to improve the national health than many more ambitious designs.—Sir Morell Mackenzie.

Prevention of Leakage in the Rubber-Dam.—It sometimes happens that in spite of careful precautions the rubber-dam slightly leaks. This can be avoided by cleaning the teeth which are to be put under the dam with a pledget of cotton saturated with 90 per cent. alcohol. The alcohol removes from the surfaces of the teeth all fatty substances, which facilitate the leakage of saliva and moisture through the smallest interstice.—*Laboratoire et Progrès Dentaire*.

Removing Glass Stoppers from Bottles.—The application of force, or heating over a flame, very often leads to breakage of a bottle from which the glass stopper cannot be removed. It is better to apply a few drops of fine sweet-oil around the stopper, and to allow the oil to remain for a short time, when the stopper can be turned. Or hold the bottle firmly between the knees, wrap a thick

twine twice around the neck of the bottle, and pull the ends of the twine to and fro. The neck of the bottle is thus heated and expands, while the stopper retains its own temperature and can easily be lifted off.—Pawelz' *Zahntechnische Reform*.

Hard or Soft Water?—Dentists have advocated the drinking of hard water, which should contain at least 15 parts by weight of calcium in 100,000 parts by weight of water, because the calcium was regarded as beneficial to the teeth. Professor Dr. Winkler, in *Therapeutische Rundschau*, opposes this view, advocating the drinking of soft water. According to him the continual ingestion of calcium is detrimental to the organism. Professor Rumpf also contends that excessive ingestion of calcium salts produces an accumulation and considerable retention of calcium in the body. This he considers of especial significance in our age, when, owing to general nervousness, arterio-sclerosis, which originally is a disease of old age due to natural wear, has become so prevalent. Winkler demands that municipalities provide either soft water from deep, underground water-basins or filtered river water.—*Zahnärztliche Rundschau*.

Artificial Dentures and Their Dangers.—A clinical history of twelve cases of swallowing of artificial dentures and one of aspiration is offered. In all these cases the dentures were more or less defective, and proved to be the work of cheap technical dentists. Still more astonishing than the poor workmanship of these dentures was the incredible indifference and carelessness exhibited by their wearers. Broken dentures were worn, although the patients were aware of their defects; others were poorly mended and altered by the wearers themselves. Frequently the dentures fell out of the patient's mouth in speaking, eating, yawning, etc. In some cases the denture was missed on awakening in the morning, the patient remembering that, as usual, he had not taken out his denture on retiring. Only one patient had been told by his dentist to remove the denture before retiring, and in the cases cited the patients were unaware of the dangers of leaving a denture in situ overnight. The swallowing of the dentures occurred eight times during sleep, four times during eating, once during coughing and sneezing. Of the thirteen patients treated only one died, the others being skilfully saved, but only at the expense of a great deal of pain and fear. Four times the denture passed through the alimentary canal; four times extraction was possible through the mouth; five times laryngotomy, and once œsophagotomy and extensive resection of the ribs and clavicle had to be resorted to in order to combat the dangerous putrefaction and suppuration in the mediastinum of the thoracic space.

These experiences should impress every practitioner with the necessity of carefully instructing his patients as to the mode and

hygiene of wearing artificial dentures.—Dr. Kroenlein, Zurich, *Schweizerische Vierteljahrschrift für Zahnheilkunde*, Zurich, No. 3, 1909.

Cleaning Nickel Ware.—One of the best methods known for keeping nickel ware bright is to wet a rag with a solution of hyposulphate of soda and wipe the article with it, drying with a soft towel and then rubbing it with a piece of chamois leather.—Prinz, *Dental Formulary*.

To Clean Nickel Instruments.—Place the instruments in a mixture of sulphuric acid 1 part, alcohol 50 parts. Let remain for ten minutes, remove, wash in hot water, and dry in sawdust.—Prinz, *Dental Formulary*.

Abrasion.—The mechanical wearing away of tooth substance resulting from occlusal attrition or other mechanical causes (clay pipe stem) is usually not painful, unless the pulp is irritated. Therapeutical applications are of no avail; filling or capping of the teeth give best results. As a prophylactic measure, the clay pipe smoker should cover the pipe stem with rubber tubing.—Prinz, *Dental Formulary*.



Ash's Dowel Crowns

The following five pages, which show some of our moulds of Ash's Detached Post Crowns, are well worth close examination and study. The illustrations will be valuable as a reference and guide in ordering by mail. Keep these illustrations in a convenient place, as, of course, you will become a user of them when you are conversant with their superiority over any of the existing dowel crowns.

The price, too, is a great consideration—make a note of it—

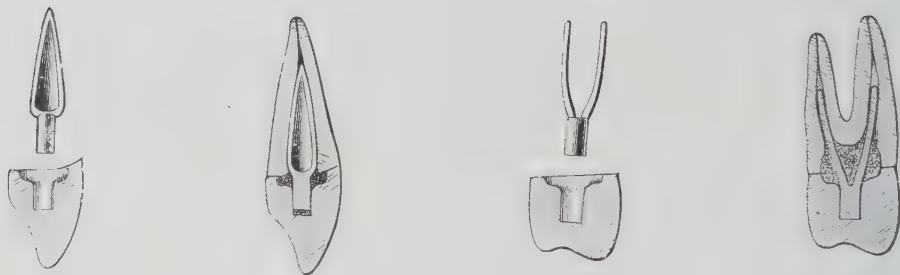
12 cents each.

\$10.00 per hundred.

Outside of the recognized value they have, as being made of our celebrated mineral, positively the only body that can be *successfully* polished after grinding, the moulds are the most serviceable. Notice in the Anterior and Bicuspid teeth, the provision for roots that are large bucco-lingually.

Note also the recess in the crown that takes the post. It is etched in each and every crown, assuring you of perfect cementation. We are also making now the labial aspect of our crowns much longer than shown in the illustrations. This improvement is obvious.

Ash's Dowel Crowns



The principal advantage of a detachable crown, as contrasted with a crown having a pin fixed in the mineral, lies in the facility afforded for grinding the base of the crown to fit the root and for bending the dowel to the angle required to obtain a correct bite.

In Ash's Dowel Crowns the measurements and shapes of the bases are such as to fit the greatest number of average roots.

The dowels are made of the best quality Dental Alloy, and are much more rigid than Platinum; they are strongest at the part which has to bear the greatest strain, viz., where the crown joins the root. Those intended for bifurcated roots of Bicuspid are extremely strong; at the same time the pin ends are sufficiently pliable and thin to allow them to follow the bends of root-canals. We need hardly emphasize the serious objection that exists to the insertion of a base metal pin in a natural root.

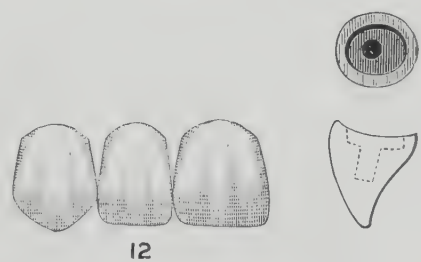
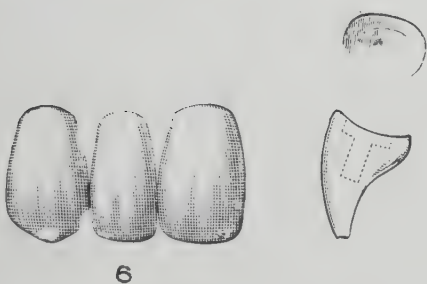
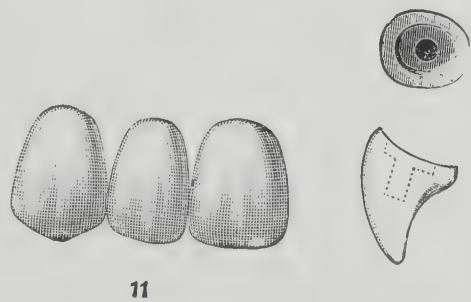
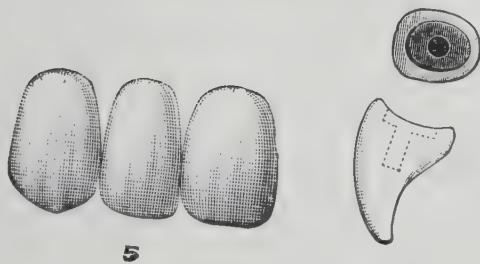
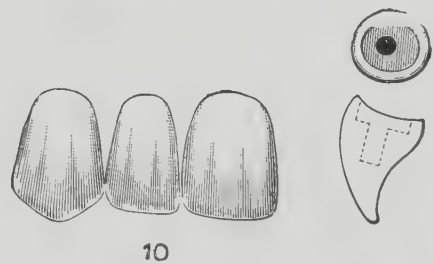
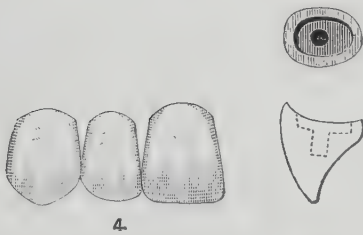
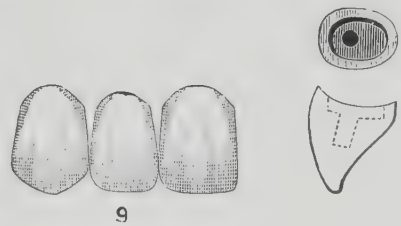
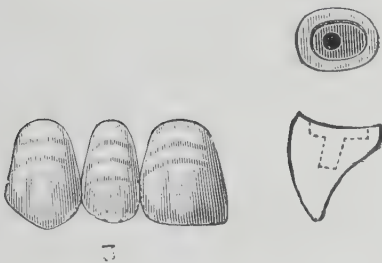
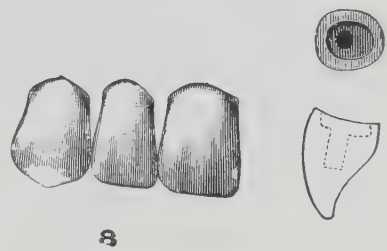
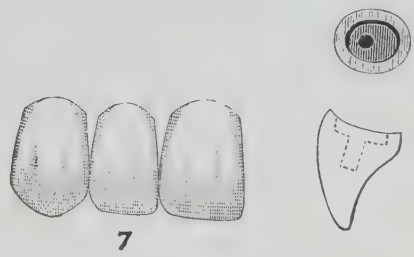
Made in sets of six—Centrals, Laterals, and Canines in thirty sizes and patterns, Bicuspid in fifteen sizes, and Molars in fourteen sizes; other sizes in preparation.

Each	12c
100 Crowns	10c
500 Crowns	9½c
1000 Crowns	9c
Single Pins, in two sizes, in Dental Alloy...each	35c
Bifurcated Pins, in Dental Alloy.....each	45c

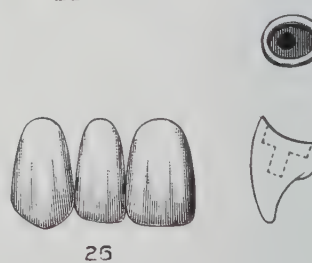
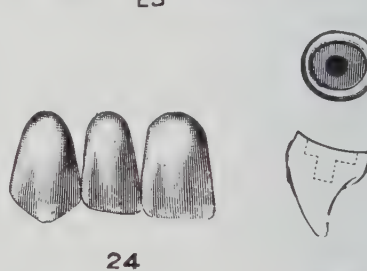
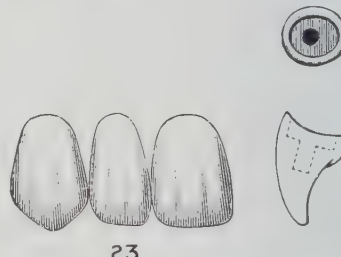
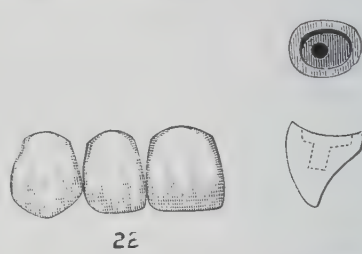
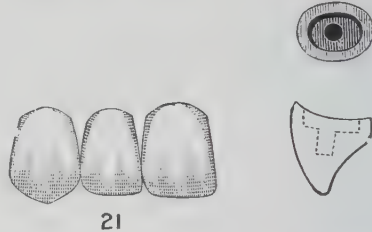
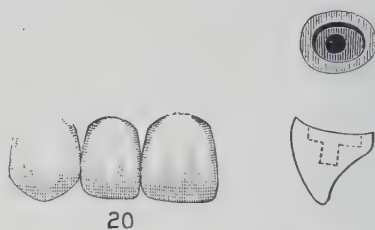
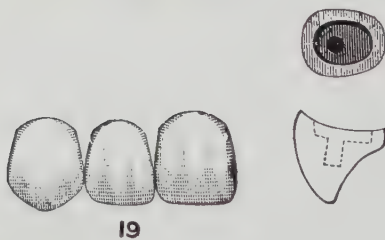
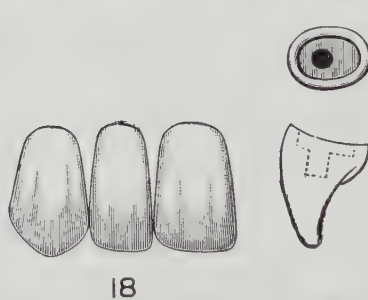
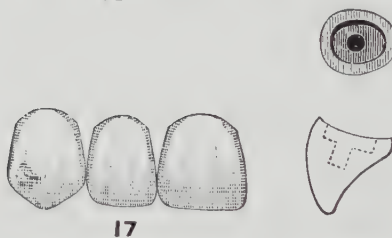
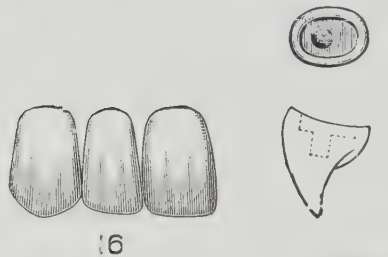
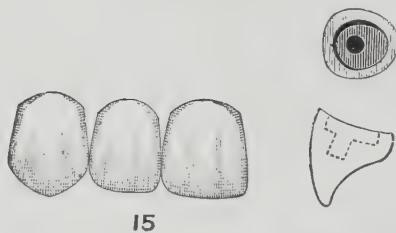
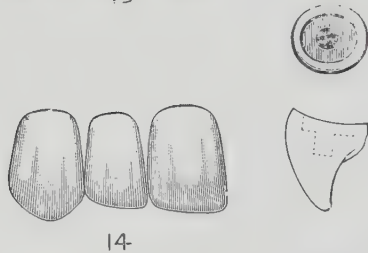
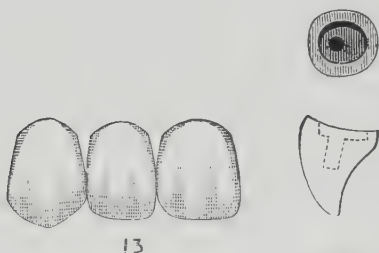
Base Metal Pins, of new and improved form, made of stiff white metal, roughened all over, each 5c.

The same for Bifurcated Roots, 15c. each.

ASH'S DOWEL CROWNS—UPPERS



ASH'S DOWEL CROWNS—UPPERS



ASH'S DOWEL CROWNS—BICUSPIDS



1



2



3



4



5



6



7



8



9



10



21



22



23



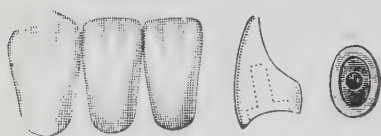
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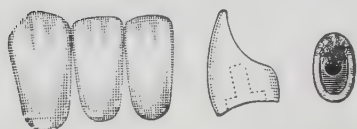
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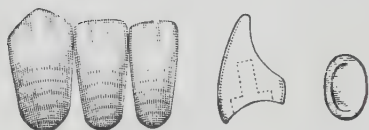
ASH'S DOWEL CROWNS—LOWERS



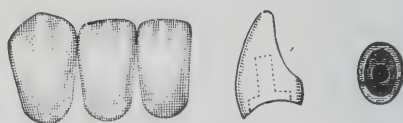
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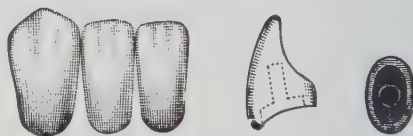
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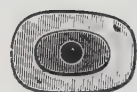


56



57

MOLARS



1



4



7



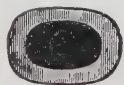
2



5



8



3



6



9

Let us send you a nice Case
of two hundred Dowel Crowns

TWENTY DOLLARS

You cannot get One Hundred
of any other reputable Crown
for less than

NINETEEN DOLLARS

Added to this Ash's Mineral
Body of which all our teeth
and crowns are made, is the
only body that can be success-
fully polished after grinding.

Our Moulds are the most natural
and the grinding surfaces are better
than on any other make of Crowns

Claudius Ash, Sons & Co., Limited

RADICIN

(Lepowski)

Has Cured Thousands
of Cases of
PUTRESCENT PULP
Trouble in One Sitting

Send A Mail Order Now

PASTE and LIQUID - - \$1.50

Claudius Ash, Sons & Co., Limited

Mouth Mirrors



Since advertising our CONE SOCKET MIRRORS at 25 cents each in previous issues, we have sold many hundreds of them.

We want to attract your attention also to our

Metal Handle Mirrors

30 CENTS EACH.

We have a fine stock of these and can supply them either PLAIN or MAGNIFYING in the various sizes.

A request postal will promptly bring one to you.

Claudius Ash, Sons & Co., Limited

Aluminum for Casting

If you Want the Best Aluminum Specify

“ASH’S”

If you have not already used ASH’S 99 per cent. Aluminum or ASH’S Aluminum Alloy, send in a Mail Order now.

We have many unsolicited testimonials from one end of Canada to the other.

One of our customers writes:—Send me 20 packets ASH’S Aluminum Alloy for casting metal plates. **I find this good.”**

PRICES

Aluminum Ingots.....per lb.	\$1.50
Aluminum Ingots .....per half lb.	.75
Aluminum Alloy.....per pkg.	.65

Claudius Ash, Sons & Co., Limited



Bottle for Local : : Anaesthetic : :

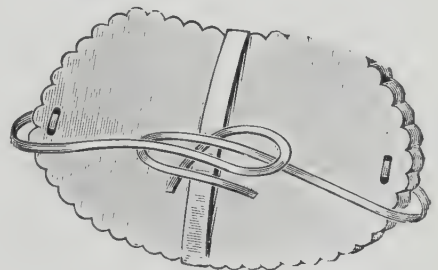
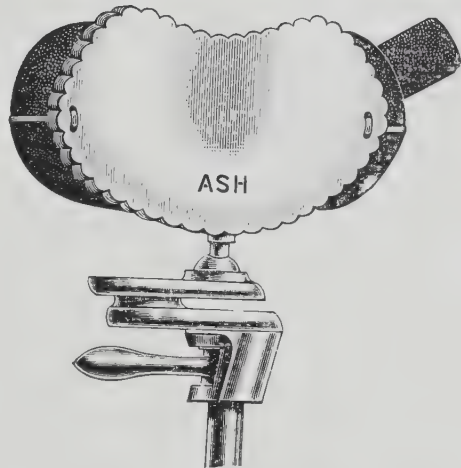
A nice attractive bottle
with a burned on label

60 CENTS EACH

Sectional : : : Head Rest Pads

A very useful paper
:: pad suitable for ::
Wilkerson or any
Sectional Head Rest

70 Cents Package



Claudius Ash, Sons & Co., Limited

Ash's Gold Solders

Unsurpassed in colour and working qualities.

A leading Toronto Dentist says :—"The best Solder I have ever used."

14 kt.....	\$.65 dwt.
16 kt.....	.75 "
18 kt.....	.85 "
20 kt.....	.95 "
22 kt.....	1.05 "

In quantities of 1 oz. ordered at one time, Cash with order, 5c. per dwt. is deducted.

An ounce Gold order may be made up of various kinds of Plate and Solder.

Ash's Dental Alloy Wire

Square and Round..... \$1.12½ dwt.

Sold only in lengths of 2 dwts. each

This wire is very rigid, being composed of Platinum and Silver and is high fusing enough to admit of pure gold being soldered to it.

Ash's Imperial Golds

CYLINDERS

SIZES $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, ASSORTED

$\frac{1}{8}$ OZ.	....	....	....	....	\$ 3.50
$\frac{1}{2}$ OZ.	....	....	....	....	13.50

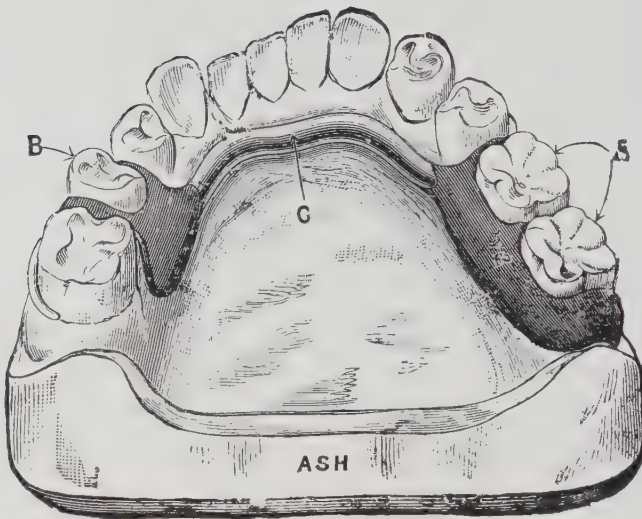
FOIL

CORRUGATED AND COHESIVE, No. 4

$\frac{1}{8}$ OZ.	....	....	....	....	\$ 3.50
$\frac{1}{2}$ OZ.	....	....	....	....	13.50

Ash's Oval Gold Cased Wire

For Bar Lowers



Bar Lower Dentures have come into universal demand. Note some of their advantages.

No tendency to push teeth outwards.

Greater cleanliness.

Less bulk.

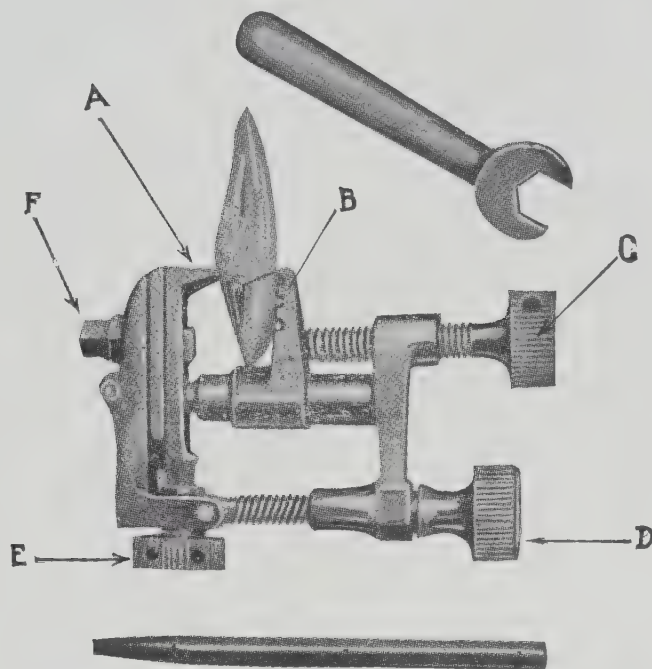
Greater rigidity.

Per dwt.....40 Cents

Mosley Crown Remover

An Ideal Appliance for Removing
Crowns from Roots.

REGISTERED



NATURAL SIZE

The Mosley Crown Remover was the first instrument devised for removing Dowel Crowns from the mouth. Its primary object is to remove these crowns without in any way injuring the roots. This is accomplished quickly and painlessly. In most cases the crowns remain uninjured and can be used again if desirable.

A slight turn to the right of Thumb Screw E removes the Crown, one Wedge Tongue pulling the Crown downwards, the remaining two supporting the root.

- | | |
|--------------------|----------------|
| A. Wedge Tongues 3 | D. Thumb Screw |
| B. Vice Jaw | E. Thumb Screw |
| C. Thumb Screw | F. Jam Nut |

Complete directions with each Remover.

PRICE - - \$5.50

Claudius Ash, Sons & Co., Limited

PRACTISES FOR SALE AND HELP WANTED

FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350

FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -

WANTED—A Graduated Assistant for all-round work. Must have experience and be sober. Apply C. Ash & Sons.

WANTED—Graduate Assistant. Toronto City. Apply Ash & Sons

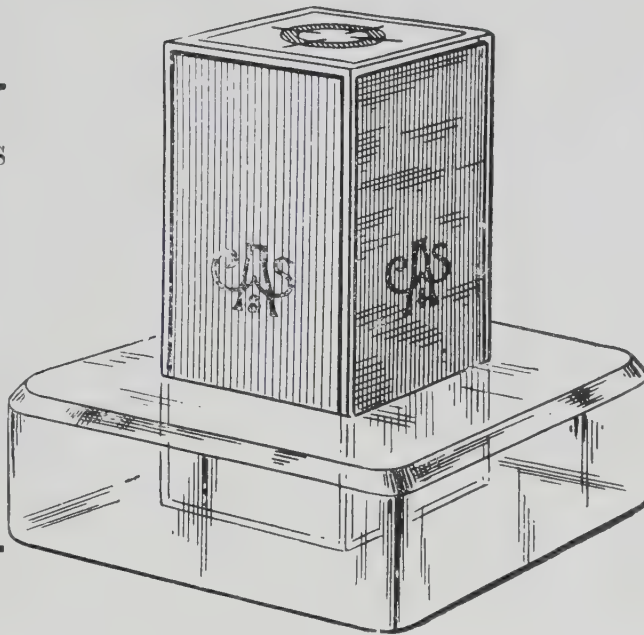
SECOND-HAND GOODS

- | | | | |
|--|---|-------|-----|
| I New Model Wilkerson Chair, A-1 condition | - - | \$160 | |
| I S.S.W. Pattern Chair, Leg Base | - - - - - | 30 | |
| I Case Harvard Chair | - - - - - | 20 | |
| I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new | - - - - - | 60 | |
| I Davis Gasometer, less Face Piece and Tubing, excellent condition | - - - - - | 18 | |
| I Wetherby Suction Machine (new style), in A-1 condition | | 25 | |
| I Pelton Porcelain Furnace, A-1 condition | - - - | 25 | |
| I Davis Gasometer | } - - - - - | 25 | |
| I Mills Centrifugal Casting Outfit | | | |
| I Olivian Swager | | | |
| I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler | - - - - - | 12 | |
| I Electro Dental All Cord, Bracket Engine, 110 Volts, 60 Cycles alternating with hand pieces. Perfect condition | - | 80 | |
| I Weber Model A No. 35 Cuspidor. Nearly new | - - - | 30 | |
| I Ash Long Range Chair. A-1 condition | - - - | 125 | |
| I S.S.W. Leg Base Oil Chair | } - - - - - | 75 | |
| I Golden Oak Clark Cabinet | | | |
| I S.S.W. Metal Fountain Cuspidor | | | |
| I Leighton-Jackes Switch Board. Onyx Face and Shelf. Nearly new. Perfect condition. 110 Volts. 60 Cycles alternating | Price including Electro Dental H.A. Syringe | | 100 |

Claudius Ash, Sons & Co., Limited

Ash's Cardboard Cartons

To fit Ash's
or other
makes of
Metal or
Glass
Bases

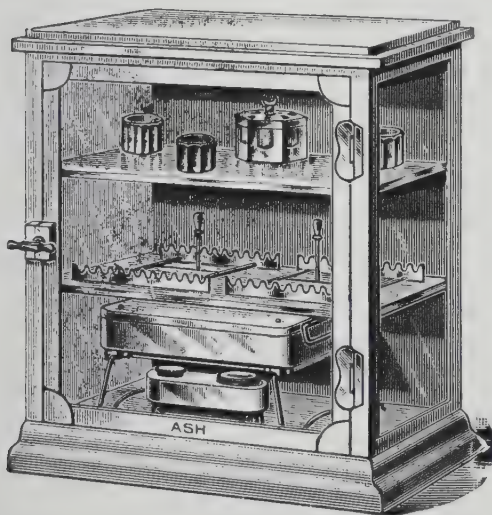


Per pack-
age of 50,
50 cents

The Glass separately sells for 40 cents

Claudius Ash, Sons & Co., Limited

Ash's No. 4 Aseptic Cabinet



With Metal Back and Metal
Frame Enamelled White;
Glass Front and Sides and
two Plate Glass Shelves.

Dimensions: 17 in. high, 12 in. wide,
8 in. deep.

From these measurements it will be
seen that this Cabinet is a convenient
size for standing on a mantelpiece, an
ordinary shelf, or a table. It is of
British manufacture, strongly made,
and well finished. It will hold a good
number of instruments and sundries.

Price, empty	-	-	-	\$12.00
With word "Sterilizer" in gold				13.00

The Time Saver in Dentistry

Are You Using the Universal Filling Gold ?

INTRODUCTORY PACKAGE

10 Pluggers	\$5.00
1 Handle	1.00
1-8 Oz. Gold	5.00
Morocco	
Plush Gold Case	1.00

Sold by All Dealers or
THE WILLIAMS GOLD REFINING COMPANY
 BUFFALO, NEW YORK

WHOLE OUTFIT \$6.00

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
 FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

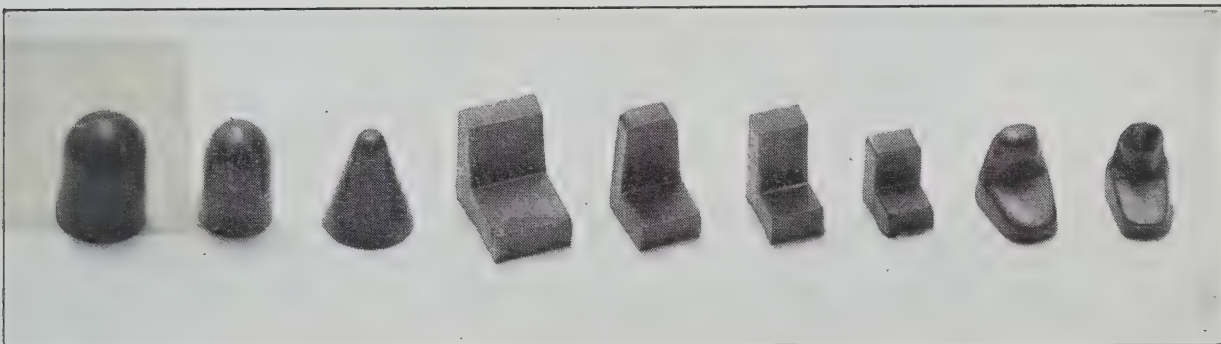
AFTER HOURS N. 4284

Van Horn Wax Forms

MADE FROM

Consolidated Casting Wax

Designed by C. P. Van Horn, D.D.S.



This assortment of shapes provides ready-made forms, requiring no alterations, for cavities of all shapes and sizes to be filled with cast inlays, saving much time and needless waste of wax :

For simple Buccal and Labial cavities.

For Compound and Double Compound Approximo-Occlusal, Mesio-Occluso-Distal Cavities, etc.

For cavities extending beneath the gum.

For Complicated cavities.

Consolidated Casting Wax has been selected by Dr. Van Horn and the leading specialists in gold casting for its superior working qualities, which guarantee preservation of models and perfect castings of the most intricate and delicate nature. It leaves no residue.

Van Horn's Casting Wax Forms are put up in boxes containing an assortment of 100 forms in 9 shapes as above illustrated.

Price per box of 100 50 Cents

FOR SALE BY LEADING DENTAL DEALERS

Consolidated  Dental Mfg. Co.

Second-Hand Chairs, Etc.

Some Chairs left over when we went out of the
Manufacturing business will be sold
regardless of cost.

- | | | | | |
|---|------|------|------------|----------|
| 1 Canadian Columbia Chair, old style, in green
plush, will be overhauled and put in good
working order | | | Price | \$60 00 |
| 1 S.S. White Leg Chair in red plush | .... |  |  | \$25 00 |
| Several latest pattern Clark Chairs in green
leather (all new) and made to sell at \$170
while they last. | | | | \$125 00 |
| Three Alternating Lathes, (Ritter) 110 volts,
60 cy., overhauled and in good running
condition, all worn parts replaced with new
and a complete new set of chucks with
each | | | Price each | \$40 00 |
| 1 Direct Lathe, 110 volts | .... | .... |  | \$30 00 |
| 1 Leighton Lathe (not one year old) A.C. 110
volts 60 cy. | | | | \$40 00 |
| 1 Leighton Wall Bracket Engine (as it is) | | | | \$35 00 |
| 1 (Almost new) Ritter Lathe 110 volts 60 cy. | | | | \$60 00 |
-

T. N. CLARK

167 King Street W.

Toronto

The Tooth of Service at Your Service

KAZAN TEETH

Are made by Johnson & Lund, of their famous high-fusing Porcelain, which has been favorably known by the profession for over half a century.

KAZAN PINS are double-headed and are fused into the porcelain—the one reliable method of attachment. KAZAN PINS are stronger than platinum, and of a size to render the maximum of service.

KAZAN TEETH are furnished in a great variety of shades, and a perfect assortment of molds, including natural forms for anatomical articulation.

Per Tooth, Gum or Plain... ..	\$ 0.10
Per Set of 14	1.00
12 Sets of 14	10.22
30 Sets of 14	24.90
63 Sets of 14	50.40
130 Sets of 14	100.10

SUBJECT TO USUAL CASH DISCOUNTS

Claudius Ash, Sons & Co., Limited

SOLE AGENTS FOR CANADA

LITHOS

THE BEST OXYPHOSPHATE OF ZINC CEMENT

- ☞ LITHOS is more adhesive, impervious and insoluble than any Zinc Cement in the world.
- ☞ We not only make that broad assertion but insert in each package a book of practical tests for you to make in your own laboratory. You can in this way satisfy yourself of its superiority before using it in the mouth. We ask you to take no chances.
- ☞ LITHOS will also stand twenty-five per cent. greater crushing strength and mixes smoother than any cement you ever had under a spatula.
- ☞ No other cement combines all these features.
- ☞ You have never used a Zinc Cement that came up to your fullest expectations because such a cement has never before been made. We guarantee LITHOS without any qualification to be superior in every respect to any Oxy-phosphate of Zinc Cement on earth.

Made in twelve shades. Price per package \$1.50.

Sold under a money-back guarantee. Your dealer has it.

Made in the Pittsburgh Laboratories of
LEE S. SMITH & SON COMPANY
PITTSBURGH, U.S.A.

TRANSLUCIN

THE BEST SILICATE CEMENT

If we can induce each dentist in the world to insert just one Translucin filling in the same mouth in which he has inserted other silicate fillings, Translucin will be the only silicate it will be possible to sell.

It is more translucent than any other. It is also more dense and it is adhesive. You mix it like you mix any ordinary cement, and you get the same results with the last drop of liquid as with the first. You know what that means. You are always working with a definite chemical compound.

Single color:	Half portion packages	-	-	\$ 3.00
	Full portion packages	-	-	4.50
Four colors:	Half portion packages	-	-	11.00
	Full portion packages	-	-	15.00

Sold under a money-back guarantee
:: :: Your Dealer has it :: ::

LEE S. SMITH & SON COMPANY
PITTSBURGH, U.S.A.

Distributors for North and South America, New Zealand, Australia and Japan

Specialists in removable and semi-removable bridge work.

Griswold, Morgan, Roach Bennett Bar, Fossume and Gilmore attachments

Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

Ash's Swaged Vulcanite Dentures, Bar Lowers, etc.

Chas. L. Daly

X. L. C. R. Dental Laboratory

ROOMS, 1, 2, 3, 4 @ 5,
11 GRENVILLE STREET
— TORONTO —

"Your impression **OF** me will largely depend upon your impression **TO** me."— C. L. Daly.

"Send good Plaster Impressions and correct wax bite and leave the rest to me"— C. L. Daly



The above cut illustrates the Dimelow Detachable Facings at **\$2.75** per Tooth, all porcelain posterior

PARTIAL PRICE LIST FOR LABORATORY WORK:

Gold Crowns : Cen. Lat. Cus.
and Bic. - - - \$2.00

Molars - - - \$2.25 to \$2.50

Bridgework : Ant. Dummies \$2.00

Ant. Richmonds (when base is
supplied by you) - - \$2.25

Bicuspid Dummies - - \$2.50

Molar - - -

Steele Detachable Porcelain Cups

Teeth included - - \$2.75

Facings charged extra at market price.

Gold Inlays

(Send wax impression packed in tissue paper)

Casting only - - - .75

Gold - - - .05 per gr.

Rubber Dentures—

Plate Work, \$2.50 to \$3.00

(Partials \$2.00)

Swaging metal plates (swaging

only) Aluminium - - \$3.00

Gold - - - \$5.00

Casting Aluminium plates

(cast only) - - - \$4.00

Gold Plates - - - \$6.00

All teeth charged extra at market price

Send impressions (unpoured) plaster
preferred, for all classes of work
including metal work.

SEND A TRIAL ORDER.

SATISFACTION GUARANTEED

When you write, give full particulars of case and when wanted.

You will not be disappointed.

CHARLES L. DALY

¶ When Do You Discover the

Some Years After You First Began To Use It

In the meantime you have placed it in hundreds of mouths and each operation has added to or taken from your reputation.

A poor cement can do a lot of damage to you in a few years, can it not?

No matter what pains you take, the completed operation is no better than the materials you have used.

A salesman comes along and offers to leave you a package of cement "on trial." You pay for it when you have used it.

Why does he leave it on trial? Because it has no reputation to back it. We know a woman who married a man to get rid of him. It wasn't a success. How are you going to know whether a cement is of any value—by the mix?

Some cements that mix best are intrinsically the poorest. Do you wish to wait a few years to find this out, when the work you have done fails to endure?

It will prove an expensive material for you. Will it not?

Why does the embryo manufacturer instruct his salesmen to say of his materials: "They are as good as Caulk's?"

Whose reputation is he trading upon? His own?

No; Caulk's.

Real Nature of a Dental Cement?

It costs us more to maintain our experimental rooms than it costs some of these "manufacturers" to run their plants.

We test every cement manufactured—know all about their nature, virtues, and defects. We know more about some of these cements than their makers know.

For if they knew what we have discovered, they would certainly hasten to make improvements.

But they are all "as good as Caulk's," according to their story. Some years hence you will know just how good they are.

We have been manufacturing cements for thirty-five years. During the last fifteen years we have sold more cement than any other firm in existence. It is impossible, at this time, with the fullest equipment and the most expert oversight, to do better.

We know that some of the cements "as good as Caulk's" are not even decent imitations; that they lack the essential qualities of endurance, and that their makers are parasites feeding upon our reputation—a reputation that has been earned through many years devoted to this line of manufacture.

We will not trifle with our reputation by offering the profession anything but the best that can be made. We think the profession knows it. How do you individually feel about it?

THE L. D. CAULK COMPANY



THE PYORRHOCIDE CLINIC

and the

EXECUTIVE OFFICES

of our Company

now occupy the sixteenth floor
of the

WORLD'S TOWER BUILDING

110 WEST 40th STREET
NEW YORK CITY

The greatly increased facilities afford better accommodations to those members of the profession desirous of taking advantage of the free instructions given in Pyorrhea treatment and prophylaxis.

VISIT THE CLINIC—everything necessary for your use is furnished free.

Pyorrhea can be successfully treated and prevented. Let us demonstrate the proved best methods.

THE DENTINOL & PYORRHOCIDE CO.



THREE QUESTIONS

DO You Remember How Close Your Platinum Matrix Adhered to the Porcelain When Making an Inlay?

DID You Ever Break Up an Old Set of Teeth and Notice How the Porcelain Adheres to the Pin?

DO You Want to Give Your Patient a Tooth Of Which You May Be Certain That the Pins Will Not Pull Out—or Do You Want to Take a Chance?

These Questions Must Suggest to You Why

JUSTI'S

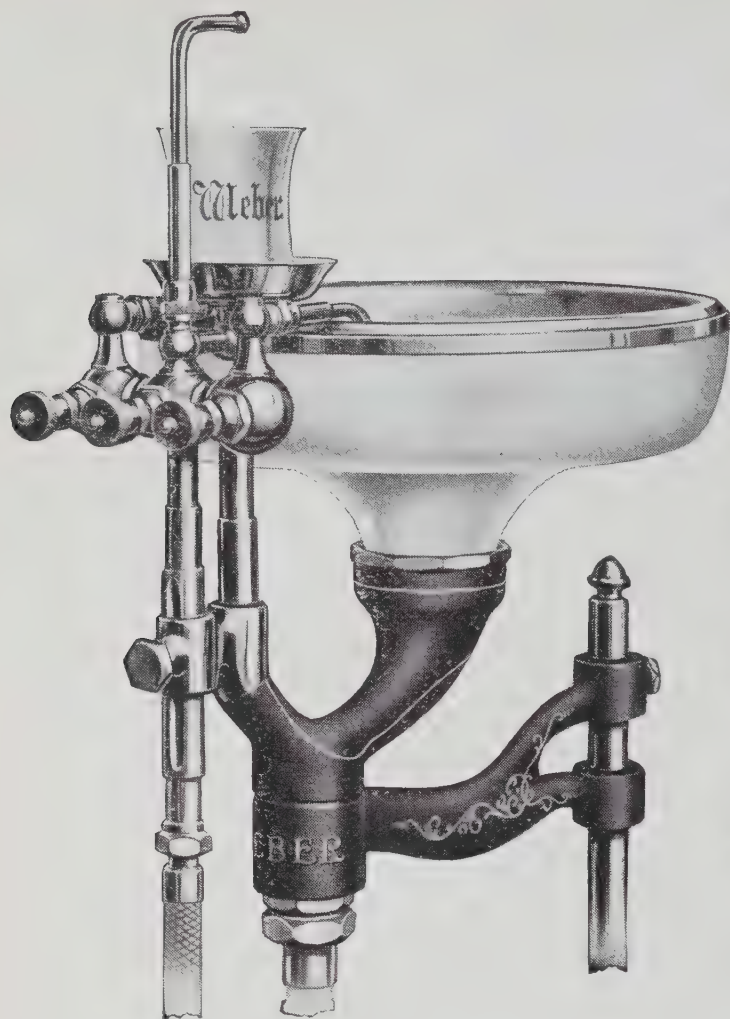
BAKED-IN TEETH

Are the Best.

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**The . .
Weber
New . .
Model
\$40.00**

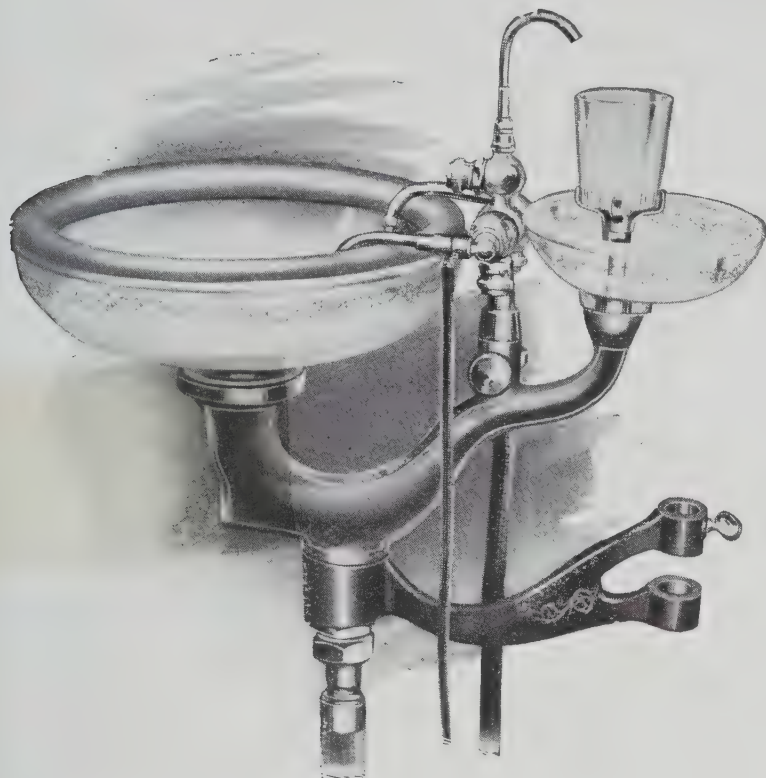
WE have no smooth talk to present, just an offer to place a WEBER Fountain Cuspidor in your office for a test, subject to your own conditions, and leave the verdict to you. This offer is based on results, not theory, as the Spittoon will go in on a basis of make good or get out.

Order one through your Dealer NOW

**The Weber Dental Mfg. Co.
CANTON, OHIO**

The World's Largest Mfrs. of Fountain Spittoons.

A Good Spittoon Comes Into Your Practice



Clark New Model Double Bowl Spittoon
With Finger Bowl Attachment



Clark New Model Single Bowl Spittoon
(Finger Bowl applicable to this type)

Practically But Once.
Most Often it Remains
Forever.

It behooves you to use
discrimination in mak-
ing your selection.

You may put your
faith in a CLARK
DOUBLE or SINGLE
BOWL SPITTOON
a Spittoon whose hon-
esty and faithfulness
are inspiring. Its beauty
and hygienic features
impress your patient.

Ask the scores of Den-
tists whose Clark Spit-
toons have been serv-
ing them for 15 to 20
years.

They are made in the
oldest and largest spit-
toon factory in the
world.

**CLARK New Model
Spittoons**—1st choice
of the discriminating
Dentist—Distinguished
and Dependable, with
Elegance combined.
Heavy Valves—Dur-
able Tubing—strong
handsome bowls of all
colors.

*Send for our Catalog,
showing Spittoons of
all Styles and Prices*

A. C. CLARK & CO.
Grand Crossing, Chicago

Are you satisfied that the Alloy fillings you are now putting in are the best that can be made? We are sure they are not unless you are using



Absolutely no contraction
One 20000 of an inch expansion
Greatest edge strength known

Ask Your Dealer

We Know How

Others May Copy.

OUR FIRST PRINCIPLE:

To Produce Metallurgical Supplies of
Highest Merit.

A SECONDARY BUSINESS CONSIDERATION:

A Secondary Class to Meet Competitive
Market Conditions in Cheapness.

Examples :

Our "Regular" Gold Solder, No. 18, is 16 karat quality
—contains $69\frac{1}{3}$ c of Pure Gold and sells at 85c. a dwt.

Some other makers of Solder in Canada supply an
article that by repeated analytical test in independent
laboratories, assays between 12 and 13 karat, contains
52 to $56\frac{1}{3}$ c of Pure Gold and sells at 80c. a dwt.

Your Choice:

$69\frac{1}{3}$ c of Gold delicately
alloyed with purest of ele-
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OR

52c. to $56\frac{1}{3}$ c. of Gold with
extra Copper to maintain
color, lacking technical super-
vision, for 80c. a dwt.

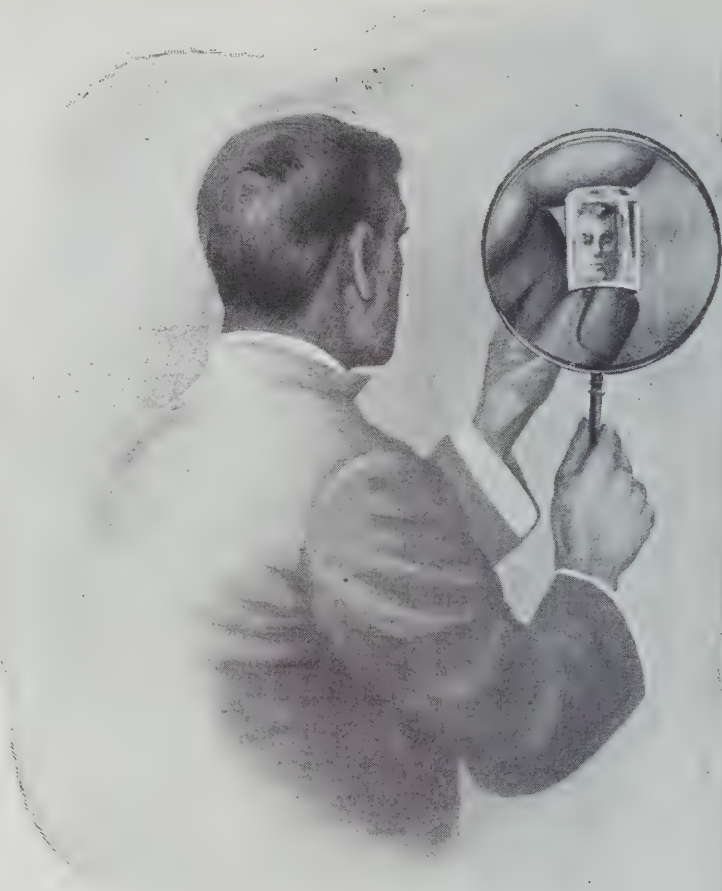
Highest Quality Jealously Guarded.

The **J.E. WILKINSON** COMPANY,
LIMITED.

The Better the Finish the Better the Work

¶ A crown or bridge with a fine finish is better than with a rough surface. The fine finish condenses the surface just enough to close the pores a little. It prevents the adhesion of deposits, resists better the attacks of chemicals contained in the food, is more welcome to the tissues, and is better in all ways.

¶ Such finish is now made easy for the dentist by the use of



Ney's Mirror Finished Seamless Gold Shells de Luxe

in which we give a mirror finish to the gold during the process of manufacture. This finish condenses the gold of the surface, as you would do it by hand burnishing. This finish may be carried throughout the operations of crown or bridge making.

¶ Crowns made with these shells are of unequalled beauty and hygienic value.

PRICES

	1 dwt.	20 dwt.	100 dwt.
22K Dark or Light, 30G	\$1.07	\$1.02	\$1.01
22K Dark or Light, 28, 29, 31, 32G	1.09	1.04	1.03

Paper labels discontinued.

Shells stamped on the inside.

TWENTY-EIGHT SIZES.

FIVE LENGTHS.

Ask your dealer to show them to you---then ask us.

THE J. M. NEY COMPANY, Hartford, Conn., U. S. A.

RADICIN

¶ To those who are using Radicin in treatment of Pulpless Teeth, it has an additional feature accidentally discovered. In treatment of upper right lateral incision for Mrs. M., I had thoroughly saturated root canal with LIQUID OF RADICIN. Wishing to wash this out to give a second application I used Wampole's Peroxide of Hydrogen. To my surprise after the effervescence had ceased, I noticed that the discoloration had been bleached out, the tooth had been returned to normal color. Finished and filled in April, have seen this particular one since and no change in color. Have just as good results in those bleached in this way since that date.

F. R. PORTER.

Dimelow Detachable Facings



*Strictly interchangeable and
the only detachable that can
be satisfactorily tipped with*
❧ ❧ ❧ ❧ gold ❧ ❧ ❧ ❧

**YOU DO NOT REQUIRE
SPECIAL BACKINGS or TOOLS**

❧ Posterior teeth in both all Porcelain and Veneer forms.

❧ We carry in Toronto a complete stock of all moulds and shades and can fit your model without delay.

❧ Dimelow teeth not only provide greater security **to you** but incidentally cost you considerably less money than other detachable outfits.

❧ Specify Dimelows for your next case. They will not disappoint you

Claudius Ash, Sons & Co., Ltd
Sole Agents

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CANADIAN

MONTHLY CIRCULAR

ISSUED FROM TORONTO ON THE FIRST OF EACH MONTH

CLAUDIUS ASH, SONS & CO. LIMITED.

CANADIAN BRANCH,

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MAIN DEPOT

LONDON, W. ENGLAND.



Dimelow Detachable Facings



Will give **You** better results than
any other detachable teeth. ❧ ❧

W H Y ?

Because of their **Greater Strength**
as you can tip them **Heavily** with
gold and still remove them before
soldering.

The more conservative bridge
workers who have stood aloof
from replacable teeth are to-day
using **Dimelow's** with security to
their reputations and at greatly
reduced cost.

If you have not received a booklet
a request postcard will bring you
one.

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SEPTEMBER, 1913

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ECONOMY no
more means
saving money
than it means
spending mon-

ey. It means the ad-
ministration of a house ;
its stewardship ; spend-
ing or saving, that is,
whether money or time,
or anything else, to the
best possible advantage.

—Ruskin

Ash's Canadian Monthly Circular

VOL. III.

TORONTO, SEPTEMBER 1, 1913

NO. 12

REPORT OF CLINIC GIVEN AT MINNESOTA STATE DENTAL CONVENTION, 1912.

By J. P. Carmichael, D.D.S., Milwaukee, Wis.

PROPHYLAXIS.

Friction polish the proper method of producing a natural, smooth and lustrous surface to the enamel.

It is generally recognized that the primary cause of disease of the teeth is the accumulation upon them of foreign matter, which provides breeding places for those bacteria which bring about decay and cause pyorrhoea. But it is not so generally recognized that the use of abrasive substances to cleanse the teeth is largely responsible for this accumulation, through the tendency of such substances to scratch and roughen the enamel surface, which, to preserve the health of the teeth, should be brilliant, smooth and highly polished. For years we have been using preparations composed of crystalline grit, which are sufficiently sharp to mar the surface of glass, with the result that the surface of the enamel has been marred and often destroyed. With the injury of this surface has come susceptibility to disease.

In this clinic it is purposed to prove these statements and to demonstrate the proper method of caring for the teeth so that they may be protected from microbic action.

You will observe that the patient selected for this demonstration has an exceedingly fine set of teeth, but even in this dental equipment conditions exist which may be termed at least predisposing causes of disease.

The first step is the application of Dr. Skinner's disclosing solution, which promptly reveals the unkept surfaces, the stains appearing most clearly at the cervical margin and approximal spaces.

Here we find adhesions on the teeth which were not visible heretofore, even under the most careful inspection. These adhesions are plaques (or scales) and are caused by an exfoliation

of the gum tissue. These adhesions, formed upon the teeth, become a foundation for the accumulation of other deposits, and prove ideal conditions for destructive microbial action.

The first step is to dry the teeth thoroughly and to examine a little further into the condition of the enamel surface. You will have no difficulty in discerning the effect of cleaning the teeth with harsh abrasives. It is evident that many gritty dentifrices have been used by this patient, for as soon as the teeth are dried we find that the gloss or luster of the enamel has almost entirely disappeared, leaving a rough surface.

You do not require to be told that such a surface is far more susceptible to the adhesions of foreign matter than the surface which is smooth and brilliantly polished like the tooth of an animal. These teeth clearly indicate the inefficiency of the tooth brush and scouring substances that contain harsh or gritty substances.

Now that we have seen the destructive effects of the popular method of caring for the teeth, we are confronted by the problem of the restoration of the surface gloss, which we admit to be so essential. The enamel of the teeth is extremely hard, and to bring back to it a polish like that of plate glass has been a most difficult process. A friction polish provides the only solution of the problem. For this purpose we must have a powder in impalpable form, but one which, when applied dry, possesses enough resistance to smooth the rough surface and, by degrees, increase the brilliancy of the enamel.

The habitual mastication of coarse, dry food provides such friction also, but in the present state of civilization but little of such food is consumed. The friction polish supplies this need and if it is used and the practice of scouring the teeth is discontinued, the luster of the teeth with the accompanying healthy conditions can be retained permanently.

The creation of this preparation by me is the result of much investigation along the line of restoring the real life luster to the teeth, upon which their health and appearance depend.

This preparation is applied dry, by means of a linen cloth or on a cotton roll with the Kuroris. For polishing the teeth necks and between the teeth the tape, charged with dry powder, is used. It has been found that these means of caring for the teeth are readily adopted and easily carried out by patients and it is highly gratifying, both to dentist and patient, to note how beautiful the teeth are made and the perfect state of health in which they are kept by this regimen.

PRACTICAL POINTS.

Brittle Vulcanite Dentures.—Brittle vulcanite dentures are usually due to faulty vulcanizers, or to insufficient care being exercised in vulcanizing. For instance, if three flasks be placed in a vulcanizer on the top of each other, the rubber in the lowest flask, which stands in the water, will come out of the vulcanizer more or less brittle; the rubber in the middle flask will come out not so brittle as that in the lowest flask; while the rubber in the top flask will invariably come out properly vulcanized, and be beautifully strong and flexible.

To get the best qualities out of dental rubbers they must always be vulcanized in pure steam. We know that in busy workshops it is very difficult to observe the best conditions for vulcanizing, owing to pressure of work.

If only one flask at a time be put in the vulcanizer, it should be kept out of the water by being placed on an iron flask stool or on one or two empty flasks.

We make it a practice not to use free water in a vulcanizer, because we have always found, during the last fifty years, that the steam generated from a lump of wet plaster in addition to the plaster in the flask, has given us more uniform and better results than steam generated from free water.

In our remarks upon vulcanizing we say: "If wet plaster only is used for the generation of steam, the quantity required in two flasks will be found sufficient, but if only one flask is put in the vulcanizer a lump of wet plaster should be added."—C. Ash, Sons & Co.

Hydrofluoric Acid.—The advantages of hydrofluoric acid for dental purposes seem to be lost sight of by many dentists.

It is invaluable in the dental workroom for removing stains from artificial teeth which sometimes result from soldering, and stains on artificial teeth which are caused by the use of medicaments employed in the mouth.

It is also extremely useful for roughening the backs of mineral facings, inlays, crowns, etc., likewise for removing the glaze from the holes in diatoric teeth when increased anchorage is desired.

Further, it can be effectually employed for dulling the surfaces of artificial teeth when they are found to be too bright. When used for this purpose, the teeth are painted over with the acid for two seconds only, and the acid is then washed off with water to which a little soda has been added.

It is needless to add that the greatest care must be taken not to allow the acid to come into contact with the fingers, as it has a very harmful effect upon the skin and finger-nails. The danger of contact can be avoided by wearing India-rubber finger-stalls while using the acid.—C. Ash, Sons & Co.

Taking Modelling Compound Impressions for Full Lower Plates.—In taking an impression for a full lower denture in wax or modelling compound, it is advisable to introduce a finger between the tray and the cheeks in order to draw aside the muscular folds which are frequently caught in the impression material. The patient should be instructed to raise his tongue high in order to keep the sub-lingual muscles away from the impression.—*Archiv für Zahnheilkunde*.

Mending Broken Plaster Models.—For fastening together broken plaster models, the following celluloid solution can be advantageously employed: The celluloid is dissolved in equal parts of camphor and ether, adding enough celluloid to obtain a mixture of creamy consistence. The parts to be joined together are dried thoroughly, coated with the solution, pressed together firmly, and allowed to dry. The celluloid mixture is insoluble in water and is not affected by the vulcanizing process.—*Archiv für Zahnheilkunde*.

Correcting the Fit of Loose or Misfit Plates without Re-making.—The palatal side of the plate is etched with an engine bur. Over this surface a thin film of vulcanite rubber dissolved in chloroform is applied, and allowed to dry five or ten minutes; to this a vulcanizable rubber paste is applied. An impression is taken in the paste, the object being to force out any excess of paste. The paste that remains on the plate compensates for any defect in the fit. The impression is then flaked with one pour of plaster, and vulcanized for the same time and at the same temperature as the usual vulcanite rubber.—G. L. Bridgford, *Western Dental Journal*.

Cocaint Habit acquired after Dental Treatment.—Dr. James A. Colton, dental inspector of the public schools in Providence, R.I., points out that the use of anaesthetics for the relief of pain may lead to serious results; reporting as follows:—

“I desire to call attention to three cases which have come under my observation quite recently. Three boys of grammar-school age have become pronounced cocaine victims from the employment of this drug, which was first used, according to their story, to relieve the suffering resulting from dental disease.”—*British Journal of Dental Science*.

Packing Vulcanite Dentures.—After separating the flask and washing out all the wax first by means of boiling water, then by flowing chloroform around the pins of the teeth, the labial and buccal surfaces where the pink rubber is to be packed are painted with a solution of red rubber dissolved in chloroform. This facilitates placing the pink rubber in the desired places, especially the triangular spaces between the teeth, without the inconvenience of its being continually displaced, so that it must be

held there during the entire packing operation. A well-stoppered bottle of the red rubber solution should always be kept on hand. After vulcanizing, the shallow coat of red rubber covering the pink can be polished off by a few turns of a sandpaper chuck.—A. C. Breckenridge, *Western Dental Journal*.

Suggestions regarding Nitrous Oxide Anaesthesia.—Snoring after the administration of nitrous oxide for a short period of time and laryngeal stertor must be carefully discriminated. Patients with thick pendulous uvulae begin to snore a few seconds after inhalation has commenced. This is also true of patients having postnasal adenoids and enlarged tonsils; also those having loose, baggy cheeks. To presume such snoring to be a sign of anaesthesia and to operate with no further testimony to the fact that anaesthesia has ensued would be committing an egregious blunder. Snoring per se is not stertor. True stertor is caused by the vibration of the aryteno-epiglottidean folds, and is more musical. A group of symptoms showing that anaesthesia has ensued would be a far safer guide to the anaesthetist, and would be more scientific. Patients will snore and yet not be anaesthetised. Breathing should be watched very carefully, but if the kind of breathing would indicate anaesthesia, and still the conjunctival reflex persists, the return to consciousness will be very rapid. The following changes are to be noted: Dusky skin; ears and finger-tips darker; pupils dilated; eyes dull and expressionless; squinting, and, if pure nitrous oxide minus oxygen be administered to children, early jactitation occur, which will often preclude the possibility of an operation. Quivering of the orbicularis palpebrarum warns us that jactitation is about to commence. Oxygen administered with nitrous oxide at this time is advantageous, because the anaesthetic qualities of the nitrous oxide progress and the asphyxial symptoms are abolished.—C. F. B. Stowell, *Dentist's Record*.

Restoring an Incisal Corner with Silicate Cement and Gold.—A number of cases present in which an incisal corner of an anterior tooth has been destroyed by caries or by trauma. Restoration with gold would mean a large unsightly and most conspicuous defect in appearance. A porcelain inlay may not be desirable. The dilemma may be solved by preparing the cavity as for a gold inlay, cutting the frail labial enamel away to where it is supported by sound dentine. If caries has approached the junction of the lobes of the tooth, it is best to cut to the labial groove. If the pulp has been involved, as it is likely to be, anchorage may be secured by a pin in the root-canal; otherwise, anchorage must be obtained by an extension lingually. After preparing the cavity, inlay pattern wax is pressed into the cavity, and wax is carved to the desired contour. Finally, before removing the pattern, with a sharp hatchet excavator, in the labial surface of the wax, an undercut cavity is prepared for the recep-

tion of a silicate cement filling in the prospective inlay. A margin of wax is left on the approximal side, also on the incisal edge of the wax pattern, to secure retention and incisal strength. The wax pattern is removed on a sprue wire, invested, and cast. If necessary, after casting, the cavity in the inlay can be touched up or the undercuts improved. The inlay is cemented to place with oxyphosphate cement; then the labial cavity is filled with a silicate cement filling, and the small margins of gold will be not at all conspicuous. Thus the aesthetic appearance of the silicate filling is combined with the strength of a gold inlay.—R. E. Macdonald, Dental Practice.

Silver Inlays: Cautionary.—Those who are tempted to economize by using silver, pure or alloyed, for cast or matrix inlays will do well to remember that silver is an uncertain metal in the mouth. In some mouths it remains clean and bright for years, apparently without change; in others it corrodes rapidly: silver dentures are occasionally destroyed in six months' time.—The Dental Brief.

Painless Excavation of a Hypersensitive Tooth Affected with Pericementitis, by the Application of Cement.—The painful tooth, with the two approximating teeth, mesially and distally, as well as the gingivae, are thoroughly dried with cotton and hot air, and thinly mixed cement is applied rather thickly upon the lingual and buccal surfaces of the three teeth, also the gingivae, the cement to be carried into the interproximal spaces. The masticating surfaces of the sound teeth may also be covered, leaving only the masticating surface of the diseased tooth free of cement. The cement is then allowed to harden, the patient being requested to leave the mouth open from five to ten minutes. After the cement has hardened completely, the diseased tooth can be excavated with new sharp burs under light pressure. The hypersensitive tooth is held firmly in position by the cement, and no pressure is exerted upon the inflamed pericementum and alveolus.

If approximating teeth are missing, the tooth may be surrounded with a layer of cement covering the gingiva, but leaving the masticating surface exposed. After the cement has hardened, the tooth can be opened without pain. By attaching a silk thread around the neck of the tooth, and having the patient or assistant exert a constant, rather strong pull upon the tooth, the pain of opening up a tooth affected with pericementitis can be reduced considerably.—*Deutsche Zahnärztliche Zeitung*.

Facilitating the Cutting of Aluminium.—Aluminium can be cut more easily and without damage by laying it on a flat surface, polishing it, and cutting it with a knife dipped in paraffin oil.—R. Moeller, *Zeitschrift für Zahnheilkunde*.

Cleaning Files.—Clogged files can be cleaned with ether, with benzine, or with spirits of turpentine and a stiff brush.—Journ. Dentaire Belge.

Retarding the Setting of Plaster.—To make plaster set slowly, it is mixed with vinegar instead of water.—R. Moeller, Zeitschrift für Zahnheilkunde.

Relieving Pain after Extraction.—An excellent remedy for pain after extraction consists in swabbing out the socket with pure lysol.—P. A. Ash, Commonwealth Dental Review.

Potassium Cyanide as a Flux in Soldering.—Potassium cyanide is more desirable as a flux than borax, when the investment is weak or the solder is to be run into a hole.—C. H. Neill, Dental Digest.

Sterilizing Wax.—Wax is sterilized by boiling it for half an hour in a large vessel containing water to every litre of which 140 grammes of oxalic acid has been added.—R. Moeller, Zeitschrift für Zahnheilkunde.

Gum Camphor for Adapting Inlay Matrices.—Gum camphor, packed into the partly adapted inlay matrix, serves to swage the metal to a close adaptation, and when burned out leaves no residue.—C. H. Neill, Dental Digest.

Softening Rubber before Packing a Plate.—Copper screening, such as may be obtained in any hardware store, makes the best support for softening rubber over steaming water while packing flasks.—C. H. Neill, Dental Digest.



THE NEW TOOTH

Dimelow Detachable Facings



¶ The manifold advantages of detachable teeth has been clearly demonstrated in recent years, yet for various reasons the only available detachable teeth have not become universal in their use.

¶ We now offer you the Dimelow Detachable Facings which overcome all the objections put forward to other teeth of this class.

¶ The following are some of the advantages:—

Ease in repairing, all being interchangeable.

Porcelain not subject to heat in Soldering.

Take up perfectly all gum recession.

Can be tipped with Gold if desired.

No weakness in tooth as body is not cut away.

No special Backings or Tools required.

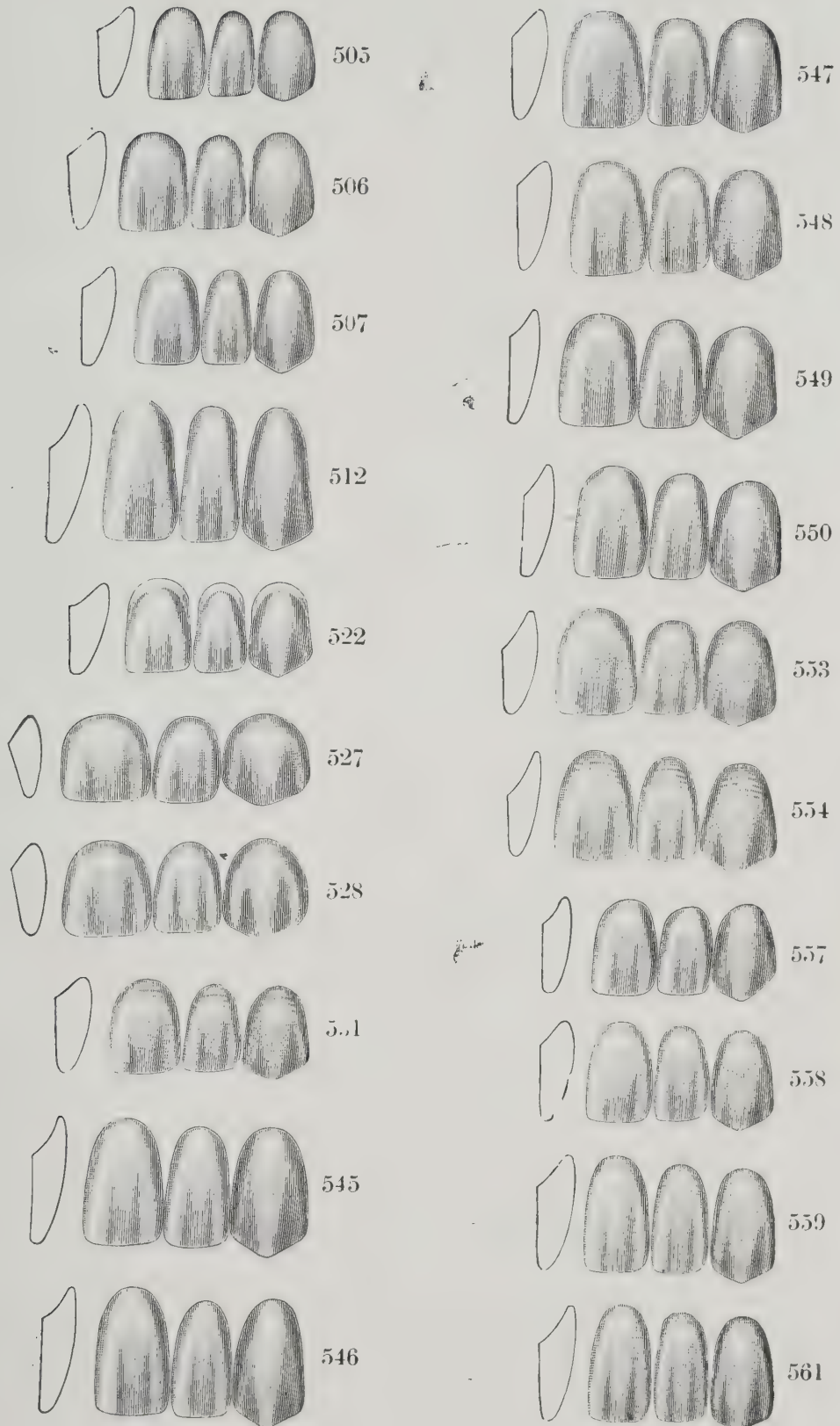
¶ In addition THE DIMELOW has all the advantages ever claimed by any detachable facings.

¶ The posterior teeth are stocked in both veneer and all porcelain forms.

¶ The three following pages illustrate the various moulds.

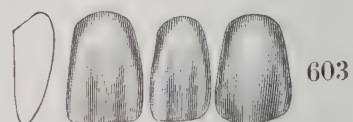
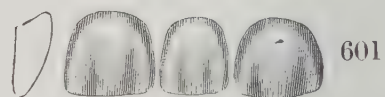
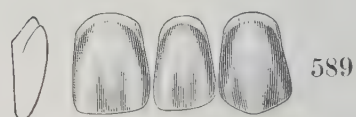
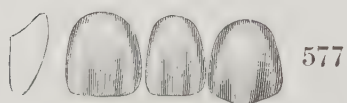
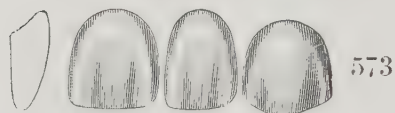
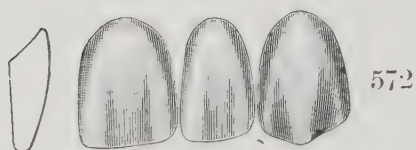
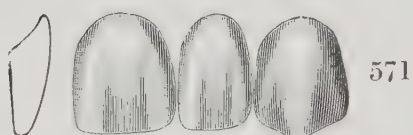
¶ For prices and special assortment see outside back cover.

Claudius Ash, Sons & Co., Limited
SOLE AGENTS

DIMELOW DETACHABLE FACINGS**Anterior Moulds**

DIMELOW DETACHABLE FACINGS

Anterior Moulds



DIMELOW DETACHABLE FACINGS

Lower Moulds



501



502



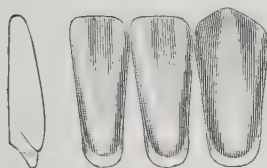
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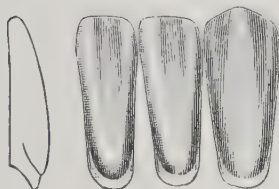
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512



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All Porcelain Posterior Moulds



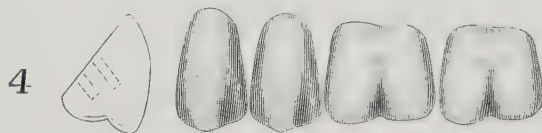
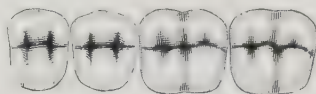
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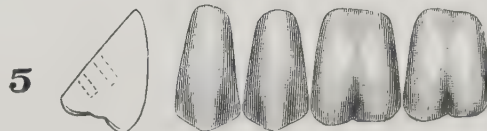
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The Dimelow Facing

DIRECTIONS FOR MAKING BACKINGS.

After grinding the facing to fit the gum and bite and beveling it toward the back, as per Fig. No. 4, cut a piece of 32 to 36 gauge gold, large enough to form a backing, which will extend well over the cutting edge. Cut a small slit in the gold, long enough to let the staple through.

After placing the staple in position in the tooth, force the cut gold over the staple until the thin arch protrudes.

With a pointed instrument tuck the gold up close to the staple, and under the arch. Bend the gold around the sides of the facing and well over the cutting edge. Trim off some of the surplus. Nip the gold at each of the cutting edge corners.

Wrap the whole in tissue paper to hold the three pieces in their respective places. Place in a swager, and with a few blows of the hammer or by pressure, the gold will adapt itself nicely to the facing and the staple. Remove the backing and the staple will come with it and will be held in place by the gold. Hold in flame and solder.

Most dentists will desire to tip the facings for protection, as the experience and practice of years has demonstrated its wisdom.

The thin gold tip that has been swaged over the cutting edge can be reinforced by burnishing a piece of thicker gold onto it. Then remove the porcelain and grasp the two pieces of metal with pliers, and after applying flux, hold in the flame of a Bunsen Burner and solder.

The directions above outlined for backing the Dimelow Facings apply also to backing the Dimelow All-Porcelain Posteriors.

As will be seen, these are constructed on exactly the same principle as the facing, but in swaging the backings as much gold should be brought down over the porcelain as the conditions will allow, this forming a cup into which the porcelain sets.

Dimelow Facings and All-Porcelain Posteriors lend themselves most perfectly to casting work. The great simplicity of simply inserting the staples in the holes and building up with wax for the balance of the crown or bridge will appeal to everyone. In this use care should be taken to see that the facing is well oiled to prevent the wax sticking to the ground surfaces, and the oil should be thoroughly removed to allow the cement to hold. Dipping the tooth in chloroform is an easy and certain method of removing the oil.

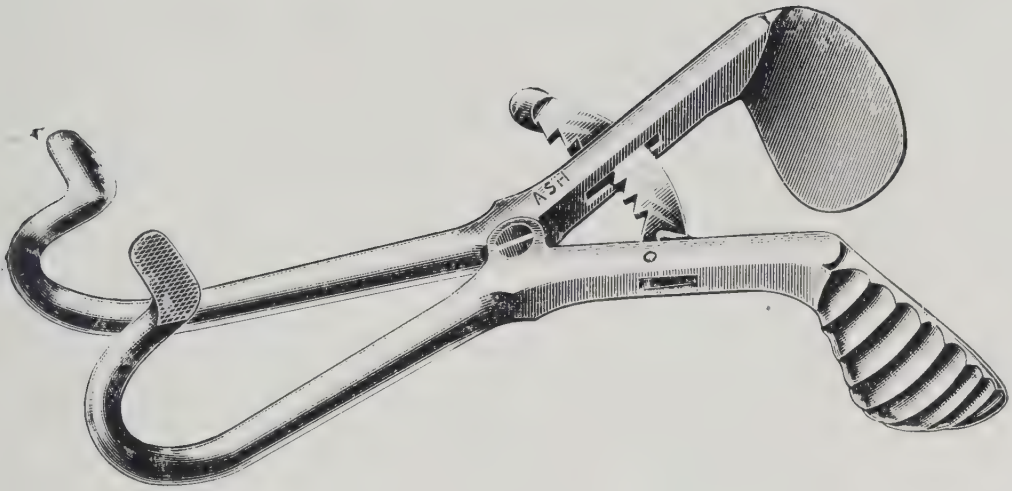
If in trying these facings in the mouth, or, in fact, during any operation, they should hug the backing closely, a bit of sticky wax applied to the face of the tooth will make the removal extremely easy.

In cementing, it is important to use a good crown and bridge cement, mixed thin.

This should be placed in a thin layer over the back of the tooth and worked down into the pin-holes with a fine instrument.

A small amount of cement should also be placed on each pin of the staple and the facing forced firmly to place.

BUXTON'S GAG



This Gag has long been the premier article of its kind. It is strong and durable. Will retain itself in the mouth and the handles are out of the way of the operator.

In addition to being a perfect Gag, it is most useful as a mouth opener, as the beaks are so constructed that one falls below the other and they can be forced in between the upper and lower teeth.

PRICE - - - \$4.50

Claudius Ash, Sons & Co., Limited

Globe Regulating Appliances

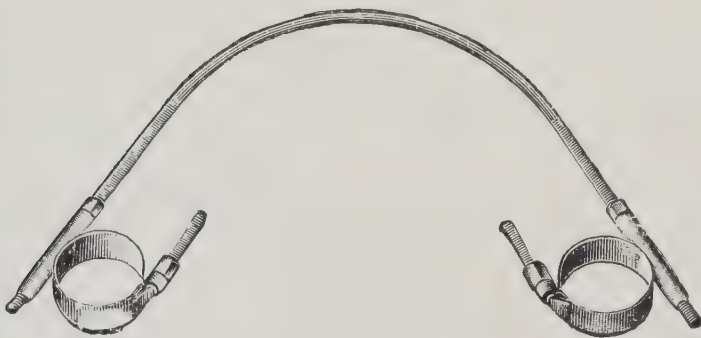
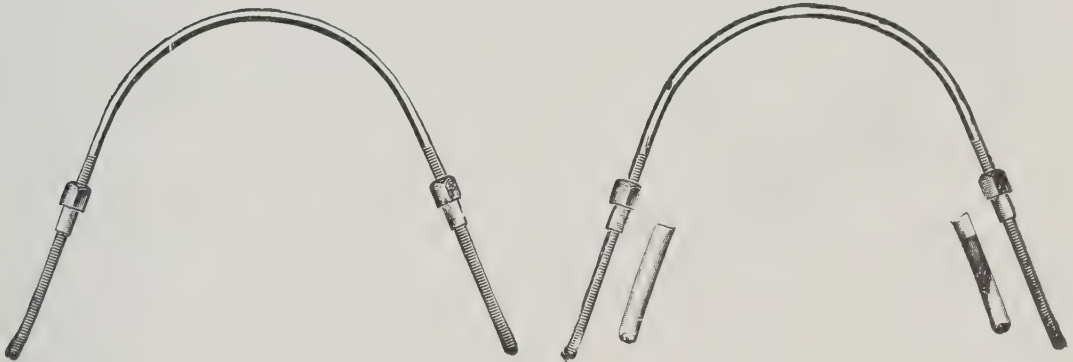
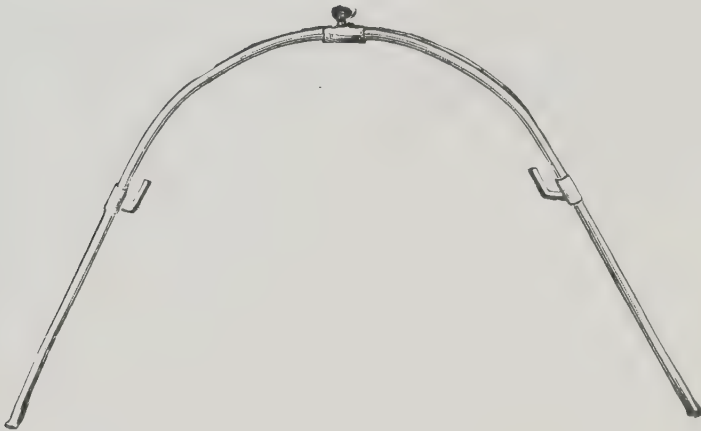
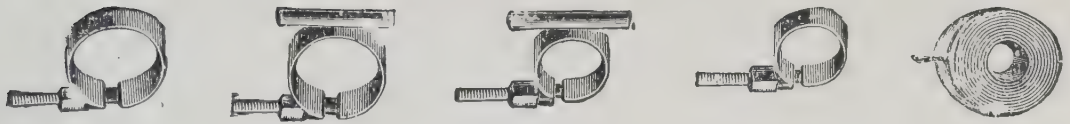
THE various parts of the Globe Appliances are made of reliable and suitable alloys, heavily gilt, and are considered exceptionally high class by the most eminent orthodontists. The quality, patterns and prices appeal to all practitioners who will also find it less expensive to employ them than to make similar appliances themselves.

No. 1. Molar Band	\$ 80
No. 2. Bicuspid Band	80
No. 3. Molar Band with tube.....	85
No. 4. Bicuspid Band with tube.....	85
No. 5. Expansion Arch with nuts.....	1 00
No. 6. Expansion Arch with nuts and tubes.....	1 15
No. 7. Expansion Arch with two Molar Bands.....	2 25
No. 8. Band Material 0.1 mm. thick.....	35
No. 9. Contraction Arch with stud and hooks.....	1 15
No. 10. Wrench.....	15
Globe Regulating Wire, two gauges, per box.....	30
Globe Regulating Rubber Ligatures, per box.....	50
Globe Regulating Head Gear with heavy bands.....	3 80
Globe Regulating Chin Cap.....	1 75

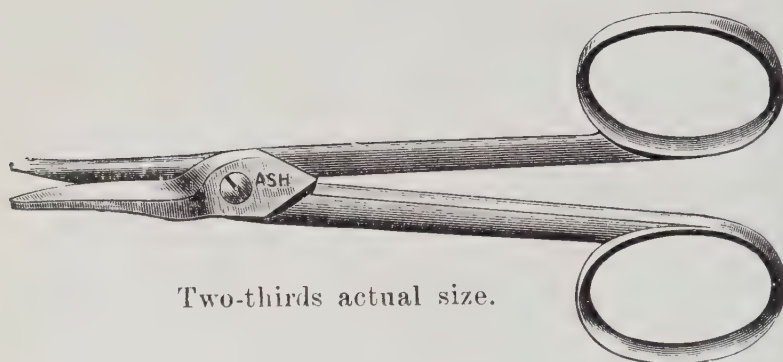
Note.—The No. 5 Arch can be supplied ribbed as well as plain.

Illustrations opposite page

Globe Regulating Appliances



Universal Plate Scissors



Two-thirds actual size.



Greatly reduced size.

This greatly reduced size illustration gives a very good idea of the power which the operator possesses in cutting metal to any form with the Universal Scissors.

Scissors, $4\frac{1}{2}$ in. long, Nickel-plated - - \$1.60

Claudius Ash, Sons & Co., Limited

Beutelrock Drills

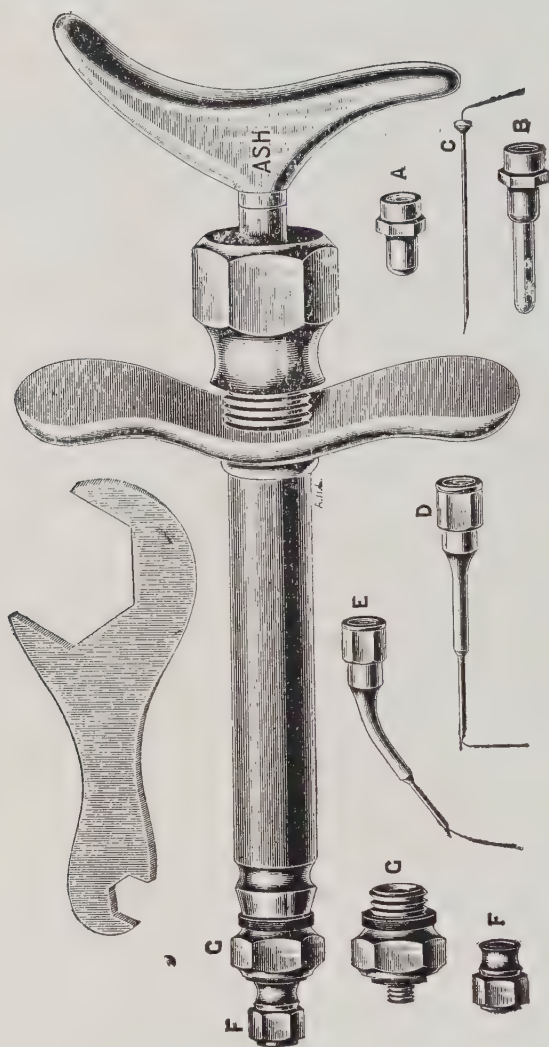
As Sole Agents of
Messrs. J. Beutelrock & Son
of Munich,
we carry in stock a complete
assortment of these celebrated
Drills for both No. 7 Hand
Piece and No. 2 Right Angle

PRICE—Single	-	-	-	35c. each
One dozen	-	-	-	\$3.60

Order now either direct or through your dealer

Claudius Ash, Sons & Co., Limited

Ash's Imperial Hypodermic Syringe



This Syringe is a strong and accurately made
British Article and will give you
splendid satisfaction.

In neat cardboard box - - \$2.00

Claudius Ash, Sons & Co., Limited

The Solbrig-Platschick Press



This cut represents **THREE** aluminum Dentures, cast on this machine. It will be noticed that these three dentures are cast through **ONE** sprue.

This machine is adapted for use for all sizes of work. The quality of metal it turns out has never been equalled in casting.

PRICE, Complete with Furnace and Blow pipe, \$60.00.

Ask for Catalogue J.

Claudius Ash, Sons & Co., Limited

Aluminum Dentures

CAST WITH THE

Solbrig-Platschick Press

As testimony to the superiority of this appliance over other machines on the market to do this work, see the number of appliances left with us for sale by people who have immediately discarded them and purchased a

SOLBRIG-PLATSCHICK

on seeing it operated.

Write us requesting information regarding this "never out of order apparatus" and we will send you some interesting information about Dentures and Metals cast by Superheated Steam.

Better still, if you are in Toronto, come to our Depot and see it operated.

Claudius Ash, Sons & Co., Limited

Aluminum for Casting

If you Want the Best Aluminum Specify

“ASH’S”

If you have not already used ASH’S 99 per cent. Aluminum or ASH’S Aluminum Alloy, send in a Mail Order now.

We have many unsolicited testimonials from one end of Canada to the other.

One of our customers writes:—“Send me 20 packets ASH’S Aluminum Alloy for casting metal plates. **I find this good.**”

PRICES

Aluminum Ingots	per lb.	\$1.50
Aluminum Ingots	per half lb.	.75
Aluminum Alloy.....	per pkg.	.65

Claudius Ash, Sons & Co., Limited

..GOLD SCRAP..

WE have been many times requested by dentists in all parts of the Dominion, to establish our own plant for the refining of gold scrap. It has been time and again represented to us that the dentists wanted a reliable, general dental manufacturer to take up this work in order to give both security and prompt and efficient returns.

¶ We are pleased to state that we have now installed this plant and are prepared to receive your scraps and cuttings.

¶ If your sendings are valuable, forward them to us by prepaid express as there is no guarantee of safe delivery by the mails.

¶ In all cases please advise us by mail of the gross weight of your scraps, as we must verify the same immediately on receipt of the package. Also state whether you desire the returns in cash or 22 k. plate.

Claudius Ash, Sons & Co., Limited

PRACTISES FOR SALE AND HELP WANTED

FOR SALE—Dental Office in country town, equipped with Chair, Engine and Gasometer. This Practice yields \$1,700 per annum to a visiting Dentist one day per week. Apply Ash & Sons - - - - - \$350

FOR SALE—Dental Practice in Western Ontario Town. An excellent opportunity. Ill health cause of selling. Apply Ash & Sons - - - - -

WANTED—A Graduated Assistant for all-round work. Must have experience and be sober. Apply C. Ash & Sons.

WANTED—Graduate Assistant. Toronto City. Apply Ash & Sons

SECOND-HAND GOODS

I New Model Wilkerson Chair, A-1 condition	- -	\$160
I S.S.W. Pattern Chair, Leg Base	- - - -	30
I Case Harvard Chair	- - - -	20
I Special Golden Oak Cabinet with Mirror and Medicine Top, practically new	- - - -	60
I Davis Gasometer, less Face Piece and Tubing, excellent condition	- - - -	18
I Wetherby Suction Machine (new style), in A-1 condition		25
I Pelton Porcelain Furnace, A-1 condition	- - -	25
I Davis Gasometer	} - - - -	25
I Mills Centrifugal Casting Outfit		
I Olivian Swager		
I Hurd Gas Stand with large new S.S.W. Gas Bag, less Tubing and Inhaler	- - - -	12
I Electro Dental All Cord, Bracket Engine, 110 Volts, 60 Cycles alternating with hand pieces. Perfect condition	-	80
I Weber Model A No. 35 Cuspidor. Nearly new	- -	30
I S.S.W. Leg Base Oil Chair	} - - - -	75
I Golden Oak Clark Cabinet		
I S.S.W. Metal Fountain Cuspidor		
I Leighton-Jackes Switch Board. Onyx Face and Shelf. Nearly new. Perfect condition. 110 Volts. 60 Cycles alternating		Price including Electro Dental H.A. Syringe 100

Claudius Ash, Sons & Co., Limited

THE FULL PORCELAIN CUSP

OF THE

Gos-Lee

INTERCHANGEABLE TOOTH

(Patented)

FOR CROWN AND BRIDGEWORK

NOW ENABLES YOU TO FURNISH PATIENTS WITH THE MOST RATIONAL BRIDGEWORK EVER MADE : : :



Send for Booklet C, "The Technique of Using the Goslee Interchangeable Tooth as a Crown and in all other forms of Bridgework."

PRICES

Goslee Tooth without pin	-	-	each	-	\$.35
Goslee Tooth without pin	(per case of 100)	-		-	30.00
Platinum Alloy pin	-	-	each	-	.30
Platinum Iridium pin	-	-	prices fluctuate		

Consolidated  **Dental Mfg. Co.**

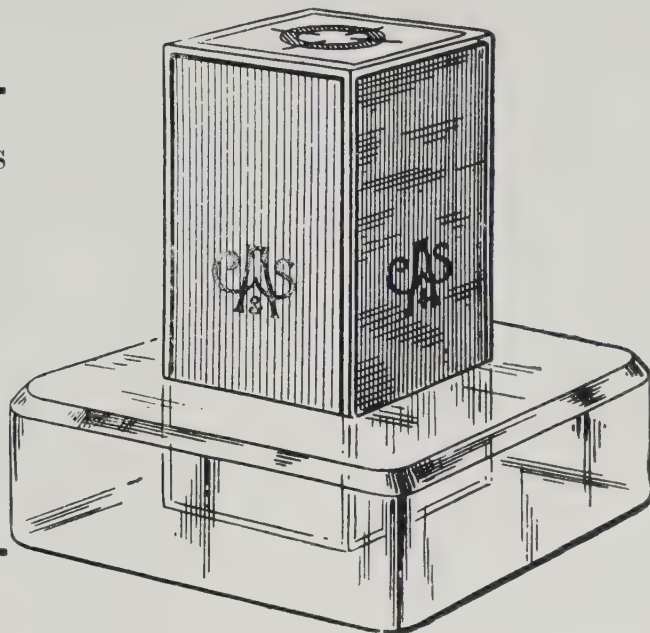
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Detroit

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Ash's Cardboard Cartons

To fit Ash's
or other
makes of
Metal or
Glass
Bases



Per pack-
age of 50,
50 cents

The Glass separately sells for 40 cents

Claudius Ash, Sons & Co., Limited

CAST ALUMINUM PLATES

BY PLATSCHICK STEAM SYSTEM
FIT AND QUALITY GUARANTEED

ALL CLASSES of MECHANICAL WORK
FOR THE DENTAL PROFESSION

SEND FOR PRICE LIST

The Monarch Dental Laboratory

467 PARLIAMENT ST., TORONTO

TELEPHONES MAIN 364

AFTER HOURS N: 4284

The Time Saver in Dentistry

Are You Using the Universal Filling Gold ?



INTRODUCTORY PACKAGE

10 Pluggers	\$5.00
1 Handle	1.00
1-8 Oz. Gold	5.00
Morocco	
Plush Gold Case	1.00

Sold by All Dealers or
THE WILLIAMS GOLD REFINING COMPANY
 BUFFALO, NEW YORK

WHOLE OUTFIT \$6.00

HORLICK'S MALTED MILK

**For INFANTS, INVALIDS,
the AGED and TRAVELERS
— IN TYPHOID FEVER —**

Pure, rich milk combined with an extract of malted grain, highly concentrated, partially pre-digested, palatable, and readily assimilated, makes **HORLICK'S Malted Milk** the physician's first choice when selecting a reliable nutriment in the treatment of Typhoid and other low fevers.

HORLICK'S Malted Milk has proved invaluable for many years past in the various diseases and conditions in which a complete, well-balanced diet is of vital importance.

A glassfull, taken hot upon retiring, proves an excellent "Night Cap" for the physician, when tired out or "chilled through."

Samples sent, free and perpaid, to the profession, upon request.

HORLICK'S MALTED MILK CO.

25 St. Peter Street, MONTREAL, Canada.

Second-Hand Chairs, Etc.

Some Chairs left over when we went out of the
Manufacturing business will be sold
regardless of cost.

1 Canadian Columbia Chair, old style, in green
plush, will be overhauled and put in good
working order Price \$60 00

1 S.S. White Leg Chair in red plush \$25 00

Several latest pattern Clark Chairs in green
leather (all new) and made to sell at \$170
while they last. \$125 00

Three Alternating Lathes, (Ritter) 110 volts,
60 cy., overhauled and in good running
condition, all worn parts replaced with new
and a complete new set of chucks with
each Price each \$40 00

1 Leighton Lathe (not one year old) A.C. 110
volts 60 cy. \$40 00

1 Leighton Wall Bracket Engine (as it is) \$35 00

1 (Almost new) Ritter Lathe 110 volts 60 cy. \$60 00

T. N. CLARK

167 King Street W.

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The Tooth of Service at Your Service

KAZAN TEETH

Are made by Johnson & Lund, of their famous high-fusing Porcelain, which has been favorably known by the profession for over half a century.

KAZAN PINS are double-headed and are fused into the porcelain—the one reliable method of attachment. KAZAN PINS are stronger than platinum, and of a size to render the maximum of service.

KAZAN TEETH are furnished in a great variety of shades, and a perfect assortment of molds, including natural forms for anatomical articulation.

Per Tooth, Gum or Plain... ..	\$ 0.10
Per Set of 14	1.00
12 Sets of 14	10.22
30 Sets of 14	24.90
63 Sets of 14	50.40
130 Sets of 14	100.10

SUBJECT TO USUAL CASH DISCOUNTS

Claudius Ash, Sons & Co., Limited

SOLE AGENTS FOR CANADA



Dr. Barber's Endorsement of the Geudel Gas Apparatus

¶ Dr. Edw. S. Barber is an analgesia specialist of national reputation. That he is authoritative in every sense of the word cannot be gainsaid.

¶ Dr. Barber uses the Guedel Gas Apparatus in his lectures in addition to Nitrous Oxide and Oxygen machines. If so eminent an authority as Dr. Barber feels the necessity of using and recommending the Guedel Gas Apparatus for analgetic work, why should you not use it in your own practise?

¶ One of the principal differences between the Guedel Apparatus and others is the fact that with it you use atmospheric oxygen at no cost instead of tank oxygen at five cents a gallon. It is, therefore, economical in maintenance as well as first cost.

¶ The Guedel Gas Apparatus is just as efficient as any of the high-priced equipments. With it you can put your patient in any desired state of analgesia and hold him there for as long as you like.

¶ Dr. Guedel's book "The Self-Administration of Nitrous Oxide" is a valuable treatise that you should own. Sent free upon request.

Geudel Apparatus, complete with chair attachment	-	\$30.00
Portable Stand, nickel plated, extra	-	5.00

LEE S. SMITH & SON, COMPANY

PITTSBURGH, U.S.A.

Specialists in removable and semi-removable bridge work.

Griswold, Morgan, Roach Bennett Bar, Fossume and Gilmore attachments

Porcelain bridge work.

Continuous Gum Work.

All classes of Tube tooth work.

Ash's Swaged Vulcanite Dentures, Bar Lowers, etc.

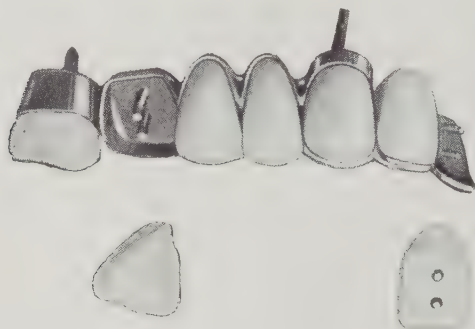
Chas. L. Daly

X. L. C. R. Dental Laboratory

ROOMS, 1, 2, 3, 4 & 5,
11 GRENVILLE STREET
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"Your impression **OF** me will largely depend upon your impression **TO** me."— C. L. Daly.

"Send good Plaster Impressions and correct wax bite and leave the rest to me"— C. L. Daly



The above cut illustrates the Dimelow Detachable Facings at \$2.75 per Tooth, all porcelain posteriors

PARTIAL PRICE LIST FOR LABORATORY WORK:

Gold Crowns : Cen. Lat. Cus. and Bic. - - -	\$2.00
Molars - - -	\$2.25 to \$2.50
Bridgework : Ant. Dummies	\$2.00
Ant. Richmonds (when base is supplied by you) - -	\$2.25
Bicuspid Dummies - -	\$2.50
Molar - - -	
Steele Detachable Porcelain Cups Teeth included - -	\$2.75
Facings charged extra at market price.	
Gold Inlays (Send wax impression packed in tissue paper)	
Casting only - - -	.75
Gold - - -	.05 per gr.

Rubber Dentures— Plate Work, \$2.50 to \$3.00 (Partial \$2 00)	
Swaging metal plates (swaging only) Aluminium - -	\$3.00
Gold - - -	\$5.00
Casting Aluminium plates (cast only) - - -	\$4.00
Gold Plates - - -	\$6.00
All teeth charged extra at market price	
Send impressions (unpoured) plaster preferred, for all classes of work including metal work.	

SEND A TRIAL ORDER.

SATISFACTION GUARANTEED

When you write, give full particulars of case and when wanted.
You will not be disappointed.

CHARLES L. DALY



THE PYORRHOCIDE CLINIC

and the

EXECUTIVE OFFICES

of our Company

now occupy the sixteenth floor
of the

WORLD'S TOWER BUILDING

110 WEST 40th STREET
NEW YORK CITY

The greatly increased facilities afford better accommodations to those members of the profession desirous of taking advantage of the free instructions given in Pyorrhea treatment and prophylaxis.

VISIT THE CLINIC—everything necessary for your use is furnished free.

Pyorrhea can be successfully treated and prevented. Let us demonstrate the proved best methods.

THE DENTINOL & PYORRHOCIDE CO.

¶ When Do You Discover the

Some Years After You First Began To Use It

In the meantime you have placed it in hundreds of mouths and each operation has added to or taken from your reputation.

A poor cement can do a lot of damage to you in a few years, can it not?

No matter what pains you take, the completed operation is no better than the materials you have used.

A salesman comes along and offers to leave you a package of cement "on trial." You pay for it when you have used it.

Why does he leave it on trial? Because it has no reputation to back it. We know a woman who married a man to get rid of him. It wasn't a success. How are you going to know whether a cement is of any value—by the mix?

Some cements that mix best are intrinsically the poorest. Do you wish to wait a few years to find this out, when the work you have done fails to endure?

It will prove an expensive material for you. Will it not?

Why does the embryo manufacturer instruct his salesmen to say of his materials: "They are as good as Caulk's?"

Whose reputation is he trading upon? His own?

No; Caulk's.

Real Nature of a Dental Cement ?

It costs us more to maintain our experimental rooms than it costs some of these "manufacturers" to run their plants.

We test every cement manufactured—know all about their nature, virtues, and defects. We know more about some of these cements than their makers know.

For if they knew what we have discovered, they would certainly hasten to make improvements.

But they are all "as good as Caulk's," according to their story. Some years hence you will know just how good they are.

We have been manufacturing cements for thirty-five years. During the last fifteen years we have sold more cement than any other firm in existence. It is impossible, at this time, with the fullest equipment and the most expert oversight, to do better.

We know that some of the cements "as good as Caulk's" are not even decent imitations; that they lack the essential qualities of endurance, and that their makers are parasites feeding upon our reputation—a reputation that has been earned through many years devoted to this line of manufacture.

We will not trifle with our reputation by offering the profession anything but the best that can be made. We think the profession knows it. How do you individually feel about it?

THE L. D. CAULK COMPANY

Are You Satisfied to Waste Your Valuable Time

The successful Dentist has his Office equipped with up-to-date appliances and is always glad to know of New Ideas by which he may Save Time and do Better Work. These are the Reasons Why he is successful.

BUT HOW ABOUT YOUR LABORATORY ?

Teeth that require an Excessive amount of Grinding and Valuable Time in setting them up, are costing You Many Extra Dollars every year.

You can Save these Dollars.

JUSTI'S TRUE-TO-NATURE TEETH
are designed after the Natural Organs and require little or No Grinding as they articulate perfectly.

Talk this over with Your Dealer.

H. D. JUSTI & SON

Philadelphia

Chicago

Are you satisfied that the Alloy fillings you are now putting in are the best that can be made? We are sure they are not unless you are using



Absolutely no contraction
One 20000 of an inch expansion
Greatest edge strength known

Ask Your Dealer



**The . .
Weber
New . .
Model
\$40.00**

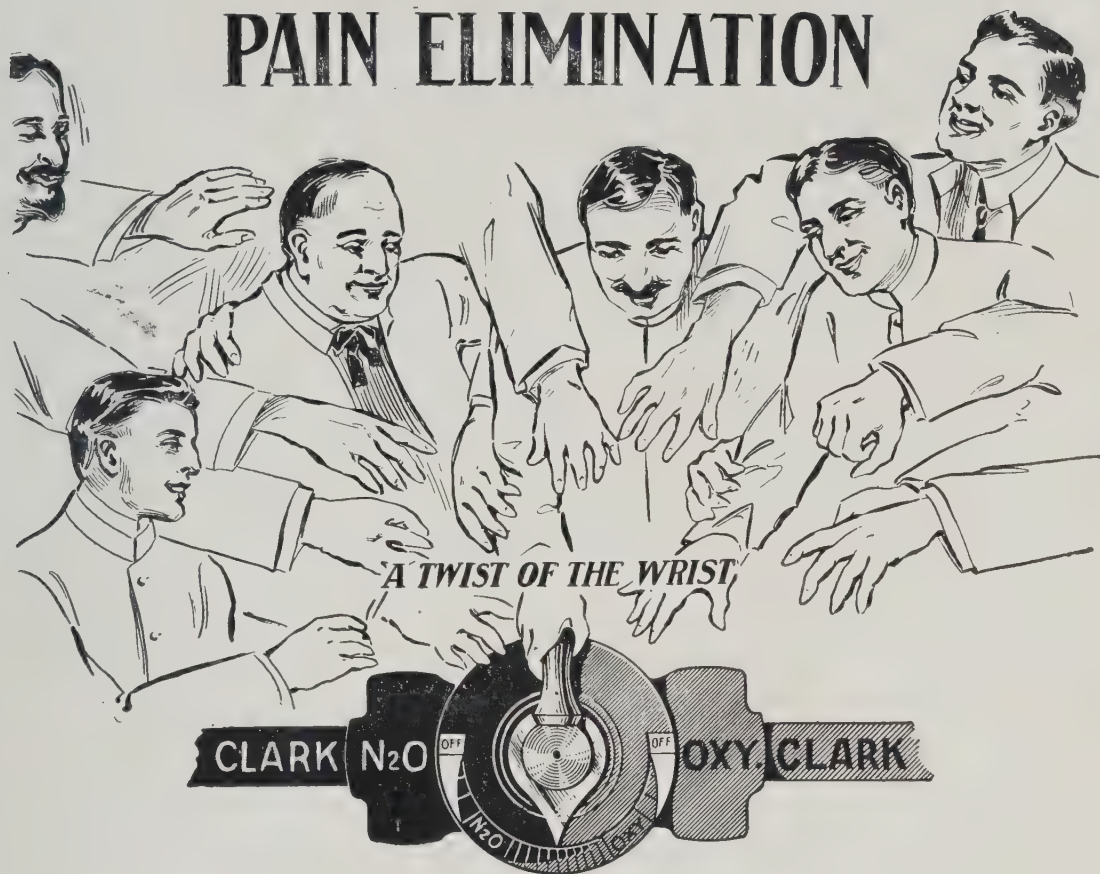
WE have no smooth talk to present, just an offer to place a WEBER Fountain Cuspidor in your office for a test, subject to your own conditions, and leave the verdict to you. This offer is based on results, not theory, as the Spittoon will go in on a basis of make good or get out.

Order one through your Dealer NOW

**The Weber Dental Mfg. Co.
CANTON, OHIO**

The World's Largest Mfrs. of Fountain Spittoons.

PROFESSION'S REALIZATION OF DEMAND FOR PAIN ELIMINATION



That's PAINLESS DENTISTRY in the ETHICAL WAY with the
CLARK NEW MODEL GAS OUTFIT

GRAND CROSSING A. C. CLARK & CO., Manufacturers CHICAGO

WRITE FOR OUR BRAND NEW CATALOG IN COLORS — AND LECTURES

THE J. M. NEY COMPANY, Hartford, Conn., U. S. A.

NEY'S GOLD DISCS.

Any Gauge Nos. 14, 15, 16, 17, 18, 19.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
20K Dark or Light.....	\$0.98 dwt.	\$0.93 dwt.	\$0.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.

NEY'S GOLD NUGGETS.

In 1, 1½, 2 and 5 dwts.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
16K Dark or Light.....	\$0.86 dwt.	\$0.81 dwt.	\$0.78 dwt.
18K Dark or Light.....	.90 dwt.	.85 dwt.	.83 dwt.
20K Dark or Light.....	.98 dwt.	.93 dwt.	.91 dwt.
21K Dark or Light.....	1.04 dwt.	.98 dwt.	.97 dwt.
Coin	1.05 dwt.	1.00 dwt.	.98 dwt.
22K Dark or Light.....	1.06 dwt.	1.01 dwt.	1.00 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.15 dwt.	1.10 dwt.	1.08 dwt.
Far Superior Non-Shrinkable.....	1.35 dwt.	1.30 dwt.	1.25 dwt.

NEY'S GOLD PLATE.

	Less than 1 oz.	1 oz. Lots.	5 oz. Lots.
10K Dark or Light.....	\$0.58 dwt.	\$0.53 dwt.	\$0.51 dwt.
12K Dark or Light.....	.66 dwt.	.61 dwt.	.59 dwt.
14K Dark or Light.....	.75 dwt.	.70 dwt.	.69 dwt.
16K Dark or Light.....	.85 dwt.	.80 dwt.	.79 dwt.
18K Dark or Light.....	.89 dwt.	.84 dwt.	.83 dwt.
20K Dark or Light.....	.97 dwt.	.92 dwt.	.91 dwt.
21K Dark or Light.....	1.03 dwt.	.98 dwt.	.97 dwt.
Coin	1.04 dwt.	.99 dwt.	.98 dwt.
22K Dark or Light.....	1.05 dwt.	1.00 dwt.	.99 dwt.
23K Dark or Light.....	1.10 dwt.	1.06 dwt.	1.05 dwt.
24K	1.14 dwt.	1.09 dwt.	1.08 dwt.
Clasp Plate	1.30 dwt.	1.25 dwt.	1.20 dwt.
Green Gold for backing.....	1.03 dwt.	.98 dwt.	.95 dwt.
Virgin	1.35 dwt.	1.30 dwt.	1.25 dwt.
24K Matrix (.003 thick).....	1.20 dwt.	1.15 dwt.	1.12 dwt.

Crown metal, Gold on one side, Platinum on the other.

PRICES FLUCTUATE.

The above Gold Plates furnished in sheet or put up in envelopes. Plates cut to pattern, slight additional charge.

The above quantity rates may be allowed on 20 dwt. and 100 dwt. assorted lots, each item being charged at its respective rate.

THE J. M. NEY COMPANY

Established 1812

Main Office and Factory:

HARTFORD, CONN., U. S. A.

STUDENTS' EQUIPMENTS

Ash's C Style Foot Engine

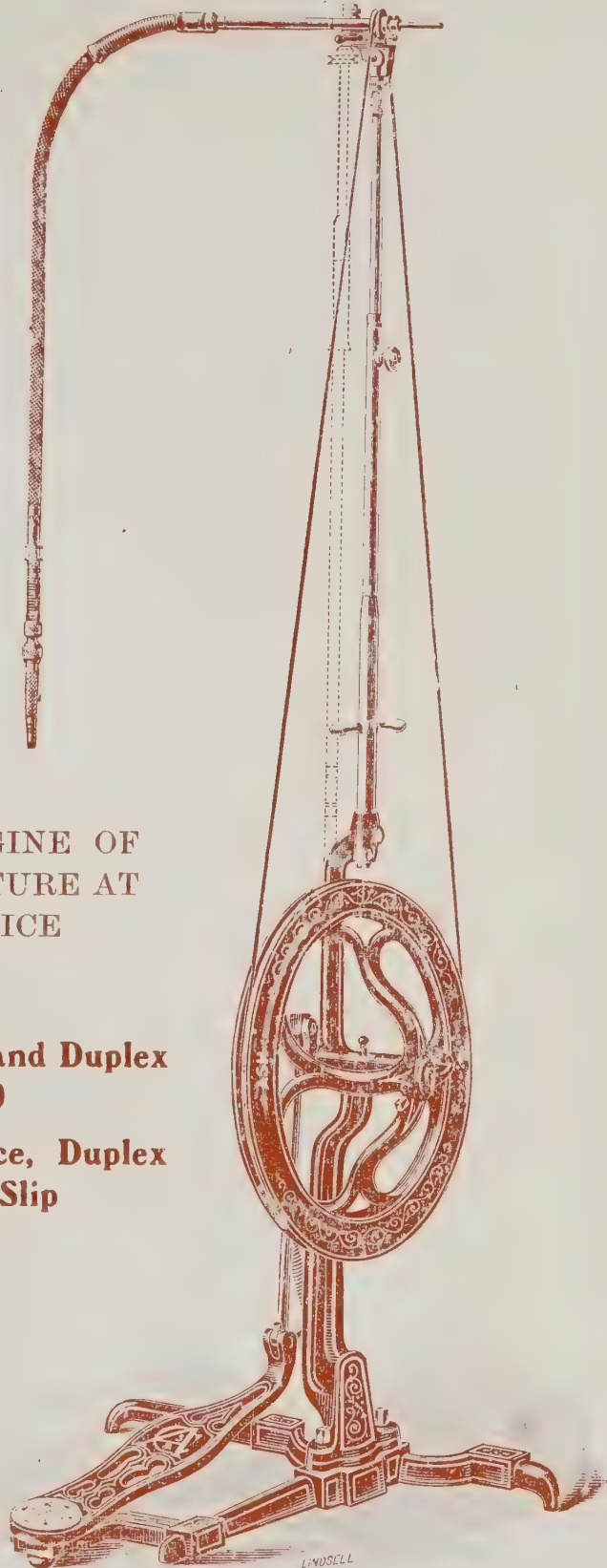


A GUARANTEED ENGINE OF
OUR OWN MANUFACTURE AT
A MODERATE PRICE

With No. 7 Hand Piece and Duplex
Spring, \$23.50

With No. 7 Hand Piece, Duplex
Spring and No. 2 Slip
Joint, \$28.50

*Cash Discounts
allowed from above
Prices*



Claudius Ash, Sons & Co., Limited

Dimelow Detachable Facing

THE NEW TOOTH



Can be mounted with or without a tip and is the ideal Bridge Tooth.

Ask for booklet showing technique. It will interest you.

Posteriors are made in both Veneers and all Porcelain forms.

Excellent moulds and shades of Johnson & Lund's well known bodies.

PRICES

Per Tooth	\$.25
108 Teeth	25.00
228 Assortment in Case	50.00
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